Appendix A

Original NOP and Comment Letters; and Amended NOP and Comment Letters

City of Fontana
Notice of Preparation of Draft EIR
and Notice of Scoping Meeting

Date: July 5, 2019

To: Responsible and Trustee Agents/Interested Organizations and Individuals

Subject: **Notice of Preparation (NOP) of a Draft Environmental Report and Notice of a Public Scoping Meeting**

Lead Agency:

CITY OF FONTANA
Planning Division
8353 Sierra Avenue
Fontana, CA 92335
909-350-6718
Contact: Cecily Session-Goins,
Assistant Planner

Consulting Firm Preparing the Draft EIR

KIMLEY-HORN AND ASSOCIATES, INC.
3880 Lemon Street, Suite 420
Riverside, CA 92501
951-543-9869
Contact: Kari Cano

This NOP includes a project description and a list of the environmental issues to be examined in the Environmental Impact Report (EIR).

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but no later than 30 days after receipt of this notice.

Please send your response to Cecily Session-Goins, Assistant Planner, at the City of Fontana address shown above. Please include the name, phone number, and address of a contact person in your response.

Project Title: **Sierra Avenue and Casa Grande Avenue Warehouse Project EIR**

Location: The proposed Project is located in the northeastern portion of the City of Fontana (City); approximately 330 feet west of the City border as shown in **Exhibit 1: Regional Vicinity.** The proposed Project site consists of three connected parcels on the northeast corner of the Sierra Avenue and Casa Grande Drive intersection; refer to **Exhibit 2: Local Vicinity**. Regional access would be available to the proposed Project via transportation routes, State Route 210 and Interstate Highway I-15. The State Route 210 entrance and exit is located approximately 1.5 miles south of the proposed Project via Sierra Avenue. The Interstate Highway I-15 entrance and exit is located approximately 1.6 miles north of the proposed Project via Sierra Avenue.

Description

A. Project Setting

The proposed Project will be constructed within three parcels in the northeast portion of the City (Assessor Parcel Numbers (APN's) 0239-151-22, 0239-151-34, and 0239-151-40) totaling approximately 16.76 acres. These three parcels are currently undeveloped and vacant with patches of brush scattered over their rocky soil. Undeveloped, vacant parcels border the proposed Project to the North and East,

with undeveloped parcels bordering the proposed Project site across Casa Grande Drive to the South and across Sierra Avenue to the West.

Two of the parcels included in the proposed Project (APNs: 0239-151-34 and 0239-151-40) have a General Plan Land Use (GPLU) designation of Regional Mixed Use (R-MU). Those two included parcels also have zoning designations of Regional Mixed Use (R-MU). The other included parcel (APN: 0239-151-22) has a GPLU designation of Multi-Family High Residential (R-MFH) and a Zoning Code designation of Multi-Family High Density Residential Zone (R-5). The parcels along the northern border of the proposed Project have GPLU designations of R-MFH and Zoning Code designations of R-5. The parcels along the southern border of the proposed Project have Light Industrial (I-L) GPLU designation and R-MU Zoning Code designations. The parcels along the eastern border of the proposed Project are designated as Public Utility Corridors (P-UC) in the GP and designated as R-MU in the Zoning Code. The parcels across Sierra Avenue, on the western border of the proposed Project have a Residential Planned Community (R-PC) GPLU designation and are located in the Arboretum Specific Plan.

B. General Plan Amendment and Change of Zone

The proposed Project consists of applications for a General Plan Amendment (GPA No. 18-006),a Zone Change (ZCA No. 18-006), and a Zoning Text Amendment (ZCA No. 18-007). The General Plan Amendment proposes the conversion of one parcel (APN: 0239-151-22) from Multi Family High Density Residential Zone (R-MFH) to Regional Mixed Use (RMU). The Zone Changes are intended to extend the boundaries of the the WarehousingDistribution/Logistics District Overlay and to apply the Overlay to all three parcels.

C. Warehouse Development

The proposed Project also involves the development of an approximately 317,820 square foot warehouse at the northeast corner of Sierra Avenue and Casa Grande Drive. The warehouse will be built within the three parcels identified in the General Plan Amendment and Change of Zone description. Landscape improvements and parking improvements along with trailer stalls are also included in the warehouse development; refer to **Exhibit 3, Site Plan**.

Environmental Issues to be Evaluated in the EIR

The City of Fontana, the lead agency for the proposed Sierra Avenue and Casa Grande Drive Warehouse Project, is subject to specific environmental review under CEQA. CEQA Guidelines §15063 provide that if a lead agency determines that an EIR will clearly be required for a project, an Initial Study is not required. In this case, the City has already determined that an EIR will need to be prepared based on the Project's potential to create short-term, long-term and cumulative impacts associated the proposed Project. Therefore, an EIR will be prepared to fully evaluate the potential impacts of the proposed Project. The EIR will evaluate all identified issues from the 2019 CEQA Initial Study Checklist.

The following issues are anticipated to be addressed in the EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire Hazards

The EIR will address the short- and long-term effects of the Project on the environment, including the impacts of any off-site improvements. It will also evaluate the potential for the Project to cause direct and indirect growth-inducing impacts, as well as cumulative impacts. Alternatives to the proposed Project will be evaluated that may reduce impacts that are determined to be significant in the EIR. Mitigation will be proposed for those impacts that are determined to be significant. A mitigation monitoring program will also be developed as required by §15097 of the CEQA Guidelines. The environmental determination in this Notice of Preparation is subject to a 30-day public review period per Public Resources §21080.4 and CEQA Guidelines §15082. Public agencies, interested organizations, and individuals have the opportunity to comment on the proposed Project, to identify those environmental issues, potentially affected by the Project which should be addressed further by the City of Fontana in the EIR.

The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (California Department of Toxic Substances Control list of various hazardous sites).

The Environmental Documentation for the Project may be downloaded from the City's website:

www.fontana.org/planning

The Environmental Documentation is also available for review Monday through Thursday, between 8 AM and 6 PM at the following location:

City of Fontana
Community Development Department
8353 Sierra Avenue
Fontana, CA 92335

Public Scoping Meeting

The City will have a Scoping Meeting to:

1) Inform the public and interested agencies about the proposed Project; and
2) Solicit public comment on the scope of the environmental issues to be addressed in the EIR.

Date: July 24, 2019
Time: 5:30 PM

Location: City of Fontana Development Services Office Building
8353 Sierra Avenue
Fontana, CA 92335

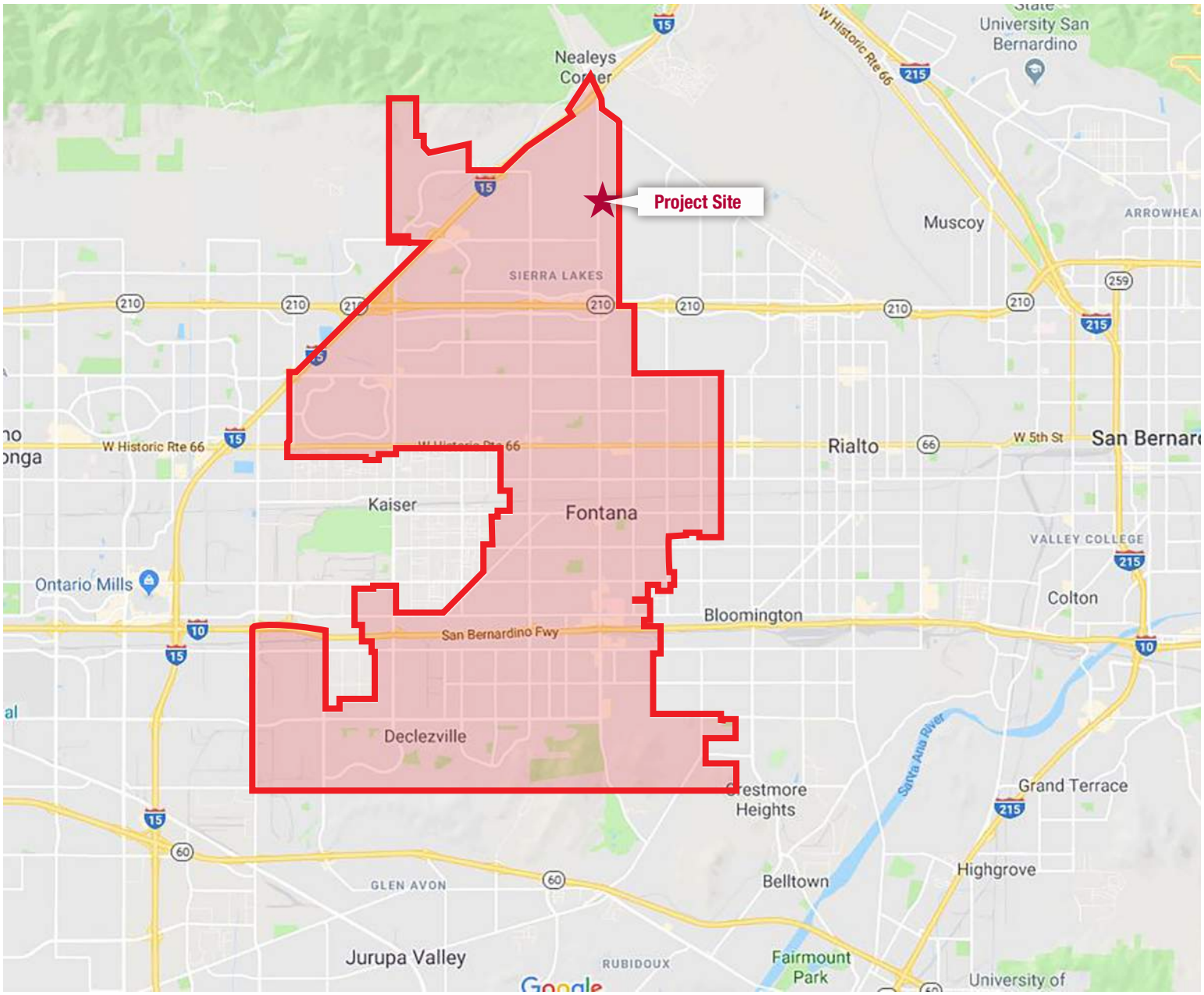


EXHIBIT 1: Regional Vicinity
Sierra Avenue/Casa Grande Drive Warehouse Project
City of Fontana

Kimley»Horn



EXHIBIT 2: Local Vicinity
Sierra Avenue/Casa Grande Avenue Warehouse Project
City of Fontana

Kimley»Horn

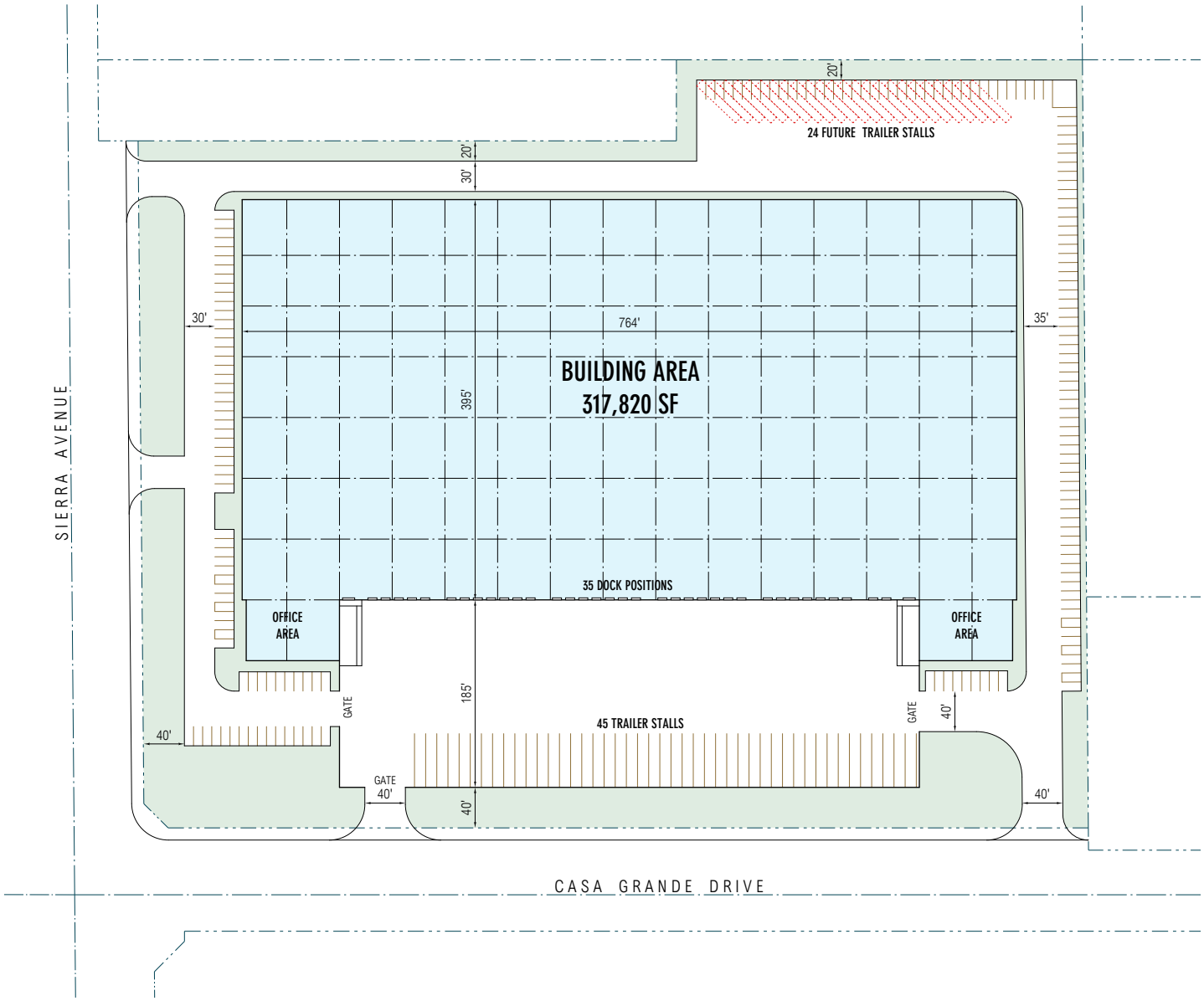


EXHIBIT 3: Site Plan

Sierra Avenue/Casa Grande Avenue Warehouse Project

City of Fontana

Kimley»Horn

DEPARTMENT OF TRANSPORTATION
OFFICE OF LOCAL DEVELOPMENT-INTERGOVERNMENTAL REVIEW
DISTRICT 8, PLANNING
464 W. 4TH STREET, 6TH FLOOR MS-725
SAN BERNARDINO, CA 92401
PHONE (909) 806-3923
TTY 711
www.dot.ca.gov/dist8

Making Conservation a California Way of Life.



October 18, 2019

File: 08-SBd-15-PM 12.324
Cross Street: Sierra Avenue
SCH#: 2019070040 - NOP

Ms. Cecily Session-Goins
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

Notice of Preparation/Draft Environmental Report
Sierra Avenue and Casa Grande Avenue Warehouse

Dear Ms. Sessions-Goins,

Thank you for including California Department of Transportation (Caltrans – District 8) in the environmental review process for a warehouse project, proposed at the northeastern corner of Sierra Avenue and Casa Grande Avenue in the City of Fontana. The proposed project for a 317,820 square foot warehouse will be constructed within three connected parcels (APNs#: 0239-151-22, 0239-151-34, 0239-151-40).

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when a proposed development may impact our facilities. As a responsible agency as defined by the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of Fontana, due to the project's potential impact to the State facilities, it is also subject to the policies and regulations that govern the SHS.

For DEIR purposes, we recommend a Traffic Impact Analysis (TIA) be prepared to accurately evaluate the extent of potential impacts of the project to the operational characteristics of the existing State facilities adjacent to the project area. Additionally, we recommend the TIA be submitted prior to the circulation of the DEIR to ensure timely review of the submitted materials and a preliminary scoping meeting to discuss any potential issues. We offer the following comments:

1) **Submit one hard copy of all TIA documents and one electronic file for review.**
The nearest State facilities to the proposed project are Interstate-15 and State Route-210; however, all State facilities potentially impacted with Project development should be identified and included in the TIA analysis. The data used in the TIA should not be more than 2 years old and analysis should be based on the Southern California Association of Governments 2016 Regional Transportation Plan Model. Also, please use the Highway Capacity Manual 6 methodology for all traffic analyses. (See *Caltrans Guide for the Preparation of Traffic Impact Studies* at http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf)

Caltrans is committed to providing a safe transportation system for all users. Where feasible, we encourage the City to implement safe, sustainable, integrated and efficient transportation system enhancements and complete street elements to enhance California's economy and livability. A pedestrian/bike-friendly environment served by multimodal transportation would reduce traffic congestion prevalent in the surrounding areas. (See *Complete Street Implementation Action Plan 2.0* at http://www.dot.ca.gov/hq/tpp/offices/ocp/docs/CSIAP2_rpt.pdf).

2) Design the adjacent local streets to serve vehicular and pedestrian circulation equally and include amenities that reflect a pedestrian friendly environment. Consider both Americans with Disability Act and California Highway Design Manual standards and requirements to provide transportation impact mitigation measures that accommodate all users and modes, including pedestrian and bicyclists. For guidance, refer to "A Policy on Geometric Design of Highways and Streets," issued by AASHTO, and the "Highway Capacity Manual", published by the Transportation Research Board to evaluate the nearest existing pedestrian facilities and to determine the opportunity for improvements or expansions.

3) Consider relegating parking spaces to the back of the buildings or at a minimum, locate preferential parking for vanpools and carpools, along with, secure, visible, and convenient bicycle parking/racks adjacent to retail and office locations. Where feasible, install electric vehicle charging stations and parking space for low-emitting, fuel-efficient, alternative-fueled vehicles in designated visitor parking areas.

These recommendations are preliminary and summarize our review of materials provided for our evaluation. If this project is later modified in any way, please forward copies of revised plans as necessary so that we may evaluate all proposed changes for potential impacts to the SHS. If you have any questions regarding this letter, please contact Jacob Mathew at (909) 806-3928 or me at (909) 806-3923.

Sincerely,

Rosa F. Clark

ROSA F. CLARK
Office Chief
Local Development-Intergovernmental Review (LD-IGR)

CALIFORNIA
AIR RESOURCES BOARD

Mary D. Nichols, Chair
Jared Blumenfeld, CalEPA Secretary
Gavin Newsom, Governor

August 1, 2019

Cecily Session-Goins
Assistant Planner
City of Fontana
Planning Division
8353 Sierra Avenue
Fontana, California 92335

Dear Cecily Session-Goins:

Thank you for providing California Air Resources Board (CARB) staff the opportunity to comment on the Notice of Preparation (NOP) for the Sierra Avenue and Casa Grande Avenue Warehouse Project (Project) Draft Environmental Impact Report (DEIR), State Clearinghouse No. 2019070040. The Project consists of the construction and operation of a 317,820 square-foot warehouse building located within the City of Fontana (City), which is the lead agency for California Environmental Quality Act (CEQA) purposes. Implementation of the Project would require a change to the existing land use designation of one of the parcels in the Project from Multi-Family High Density Residential to Regional Mixed Use.

CARB staff is concerned about the air pollution and health risk impacts that would result should the City approve the Project to build the proposed warehouse building. Freight facilities, such as warehouse and distribution facilities, can result in high daily volumes of heavy-duty diesel truck traffic and operation of onsite equipment (e.g., forklifts, yard tractors) that emit toxic diesel emissions, and contribute to regional air pollution and global climate change.

Existing residences are located east, west, north and southwest of the Project site, with the closest residences situated approximately 280 feet from the Project's eastern boundary. In addition to residences, there are three elementary schools (Fitzgerald Elementary School, Kordyak Elementary School, and Sierra Lakes Elementary School) and a middle school (Wayne Ruble Middle School) located within two miles of the Project. The communities near the Project are surrounded by existing toxic diesel emission sources, which include existing warehouses and other industrial uses, vehicular traffic along Interstate 15 (I-15) and State Route 210 (SR-210), as well as heavy truck traffic to Mid-Valley Sanitary Landfill. Due to the Project's proximity to residences and schools already disproportionately burdened by multiple sources of pollution, CARB staff is concerned with the potential cumulative health impacts associated with the construction and operation of the Project.

The State of California has placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill 617 (AB 617) (Garcia, Chapter 136, Statutes of 2017). AB 617 is a significant piece of air quality legislation that highlights the need for further emission reductions in communities with high exposure burdens, like those in which the Project is located. Diesel emissions generated during the construction and operation of the Project would negatively impact the community, which is already disproportionally impacted by air pollution from existing freight facilities.

Through its authority under Health and Safety Code, section 39711, the California Environmental Protection Agency (CalEPA) is charged with the duty to identify disadvantaged communities. CalEPA bases its identification of these communities on geographic, socioeconomic, public health, and environmental hazard criteria (Health and Safety Code, section 39711, subsection (a)). In this capacity, CalEPA currently defines a disadvantaged community, from an environmental hazard and socioeconomic standpoint, as a community that scores within the top 25 percent of the census tracts, as analyzed by the California Communities Environmental Health Screening Tool Version 3.0 (CalEnviroScreen). Communities that score within the top 25 percent of the census tracts are exposed to higher concentrations of air pollutants and have a higher Pollution Burden.[1] CalEnviroScreen uses a screening methodology to help identify California communities currently disproportionately burdened by multiple sources of pollution. According to CalEnviroScreen, communities near the Project score within the top 10 percent of the census tracts. Therefore, CARB urges the County to ensure that the Project does not adversely impact neighboring disadvantaged communities.

The NOP does not state whether the industrial uses proposed under the Project would include cold storage. The operation of cold storage warehouses would include trucks with transport refrigeration units (TRU) that emit significantly higher levels of toxic diesel emissions, oxides of nitrogen (NO_x), and greenhouse gases than trucks without TRUs. Since it is unclear whether the Project would include cold storage warehouse space, any modeling done in support of the air quality analysis of the DEIR and associated health risk assessment (HRA) should assume that a conservative percentage of the truck and trailer fleet that would be serving the Project are equipped with TRUs.

In addition to the health risk associated with operations, construction health risks should be included in the air quality section of the DEIR and the Project's HRA. Construction of the Project would result in short-term diesel emissions from the use of both on-road and off-road diesel equipment. The Office of Environmental Health Hazard Assessment's (OEHHA) guidance recommends assessing cancer risks for construction projects

[1] Pollution Burden represents the potential exposures to pollutants and the adverse environmental conditions caused by pollution.

lasting longer than two months. Since construction would very likely occur over a period lasting longer than two months, the HRA prepared for the Project should include health risks for existing residences near the Project site during construction.

The HRA prepared in support of the Project should be based on the latest OEHHA guidance (2015 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments),[2] and the South Coast Air Quality Management District's CEQA Air Quality Handbook.[3] To reduce the exposure of toxic diesel emissions in disadvantaged communities already disproportionally impacted by air pollution, the final design of the Project should include all existing and emerging zero-emission technologies to minimize NO_x and diesel emission exposure to all neighboring communities, as well as the greenhouse gases that contribute to climate change. CARB encourages the County and applicant to implement the measures listed in Attachment A of this comment letter to reduce the Project's construction and operational air pollution emissions.

The HRA should evaluate and present the existing baseline (current conditions), future baseline (full build-out year, without the Project), and future year with the Project. The health risks modeled under both the existing and the future baselines should reflect all applicable federal, state, and local rules and regulations. By evaluating health risks using both baselines, the public and county planners will have a complete understanding of the potential health impacts that would result from the Project.

CARB staff appreciates the opportunity to comment on the NOP for the Project and can provide assistance on zero-emission technologies and emission reduction strategies, as needed. Please include CARB on your State Clearinghouse list of selected State agencies that will receive the DEIR as part of the comment period.

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[2] Office of Environmental Health Hazard Assessment (OEHHA). Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February 2015. Accessed at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[3] SCAQMD's 1993 Handbook can be found at http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook

If you have questions, please contact Stanley Armstrong, Air Pollution Specialist, at (916) 440-8242 or via email at stanley.armstrong@arb.ca.gov.

Sincerely,

Richard Boyd, Chief
Risk Reduction Branch
Transportation and Toxics Division

Attachment

cc: See next page.

cc: State Clearinghouse
P.O. Box 3044
Sacramento, California 95812

Morgan Capilla
NEPA Reviewer
U.S. Environmental Protection Agency
Air Division, Region 9
75 Hawthorne Street
San Francisco, California 94105

Carlo De La Cruz
Sierra Club
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Oakland, California 94612

Lijin Sun
Program Supervisor - CEQA
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Andrea Vidaurre
Center for Community Action and Environmental Justice
P.O. Box 33124
Riverside, California 92519

Stanley Armstrong
Air Pollution Specialist
Exposure Reduction Section
Transportation and Toxics Division

ATTACHMENT A

Recommended Air Pollution Emission Reduction Measures for Warehouses and Distribution Centers

California Air Resources Board (CARB) staff recommends developers and government planners use all existing and emerging zero to near-zero emission technologies during project construction and operation to minimize public exposure to air pollution. Below are some measures, currently recommend by CARB staff, specific to warehouse and distribution center projects. These recommendations are subject to change as new zero-emission technologies become available.

Recommended Construction Measures

1. Ensure the cleanest possible construction practices and equipment are used. This includes eliminating the idling of diesel-powered equipment and providing the necessary infrastructure (e.g., electrical hookups) to support zero and near-zero equipment and tools.

2. Implement, and plan accordingly for, the necessary infrastructure to support the zero and near-zero emission technology vehicles and equipment that will be operating onsite. Necessary infrastructure may include the physical (e.g., needed footprint), energy, and fueling infrastructure for construction equipment, onsite vehicles and equipment, and medium-heavy and heavy-heavy duty trucks.

3. In construction contracts, include language that requires all off-road diesel-powered equipment used during construction to be equipped with Tier 4 or cleaner engines, except for specialized construction equipment in which Tier 4 engines are not available. In place of Tier 4 engines, off-road equipment can incorporate retrofits such that emission reductions achieved equal or exceed that of a Tier 4 engine.

4. In construction contracts, include language that requires all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during project construction be battery powered.

5. In construction contracts, include language that requires all heavy-duty trucks entering the construction site, during the grading and building construction phases be model year 2014 or later. All heavy-duty haul trucks should also meet CARB's lowest optional low-NO_x standard starting in the year 2022.[1]

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[1] In 2013, CARB adopted optional low-NO_x emission standards for on-road heavy-duty engines. CARB staff encourages engine manufacturers to introduce new technologies to reduce NO_x emissions below the current mandatory on-road heavy-duty diesel engine emission standards for model years 2010 and later. CARB's optional low-NO_x emission standard is available at https://www.arb.ca.gov/msprog/onroad/optionnox/optionnox.htm.

6. In construction contracts, include language that requires all construction equipment and fleets to be in compliance with all current air quality regulations. CARB staff is available to assist in implementing this recommendation.

Recommended Operation Measures

1. Include contractual language in tenant lease agreements that requires tenants to use the cleanest technologies available, and to provide the necessary infrastructure to support zero-emission vehicles and equipment that will be operating onsite.

2. Include contractual language in tenant lease agreements that requires all loading/unloading docks and trailer spaces be equipped with electrical hookups for trucks with transport refrigeration units (TRU) or auxiliary power units. This requirement will substantially decrease the amount of time that a TRU powered by a fossil-fueled internal combustion engine can operate at the project site. Use of zero-emission all-electric plug-in TRUs, hydrogen fuel cell transport refrigeration and cryogenic transport refrigeration are encouraged and can also be included lease agreements.[2]

3. Include contractual language in tenant lease agreements that requires all TRUs entering the project site be plug-in capable.

4. Include contractual language in tenant lease agreements that requires future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans.

5. Include contractual language in tenant lease agreements requiring all TRUs, trucks, and cars entering the Project site be zero-emission.

6. Include contractual language in tenant lease agreements that requires all service equipment (e.g., yard hostlers, yard equipment, forklifts, and pallet jacks) used within the project site to be zero-emission. This equipment is widely available.

7. Include contractual language in tenant lease agreements that requires all heavy-duty trucks entering or on the project site to be model year 2014 or later today, expedite a transition to zero-emission vehicles, and be fully zero-emission beginning in 2030.

[2] CARB's Technology Assessment for Transport Refrigerators provides information on the current and projected development of TRUs, including current and anticipated costs. The assessment is available at https://www.arb.ca.gov/msprog/tech/techreport/tru_07292015.pdf.

8. Include contractual language in tenant lease agreements that requires the tenant be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation,[3] Periodic Smoke Inspection Program (PSIP),[4] and the Statewide Truck and Bus Regulation.[5]

9. Include contractual language in tenant lease agreements restricting trucks and support equipment from idling longer than five minutes while onsite.

10. Include contractual language in tenant lease agreements that limits onsite TRU diesel engine runtime to no longer than 15 minutes. If no cold storage operations are planned, include contractual language and permit conditions that prohibit cold storage operations unless a health risk assessment is conducted and the health impacts fully mitigated.

11. Include rooftop solar panels for each proposed warehouse to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.

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[3] In December 2008, CARB adopted a regulation to reduce greenhouse gas emissions by improving the fuel efficiency of heavy-duty tractors that pull 53-foot or longer box-type trailers. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation is available at https://www.arb.ca.gov/cc/hdghg/hdghg.htm.

[4] The PSIP program requires that diesel and bus fleet owners conduct annual smoke opacity inspections of their vehicles and repair those with excessive smoke emissions to ensure compliance. CARB's PSIP program is available at https://www.arb.ca.gov/enf/hdvip/hdvip.htm.

[5] The regulation requires newer heavier trucks and buses must meet particulate matter (PM) filter requirements beginning January 1, 2012. Lighter and older heavier trucks replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. CARB's Statewide Truck and Bus Regulation is available at https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

August 5, 2019
Sent via email

Ms. Cecily Session-Goins
Assistant Planner
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335
CSGoins@fontana.org

Subject: Notice of Preparation of a Draft Environmental Impact Report
Sierra Avenue and Casa Grande Project
State Clearinghouse No. 2019070040

Dear Ms. Sessions-Goins:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Sierra Avenue and Casa Grande Project (Project; State Clearinghouse No. 2019070040) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1].

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

Project Location

The Project site is located within three parcels encompassing approximately 16.76 undeveloped acres located immediately northeast of the Sierra Ave. and Casa Grande Ave intersection in the City of Fontana, San Bernardino County (APN 0239-151-22, 0239-151-34, 0239-151-40).

Project Description

The Project proposes a General Plan Amendment to convert parcel APN 0239-151-22 from Multi Family High Density Residential Zone to Regional Mixed Use (GPA No. 18-006); extend the boundary of the Warehousing Distribution/Logistics District Overlay (ZCA No. 18-006); apply the Overlay to all three Project parcels; and construction of a 317,820 square foot warehouse. The warehouse development will include landscape improvements and parking improvements.

COMMENTS AND RECOMMENDATIONS

CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species (i.e., biological resources); and administers the Natural Community Conservation Planning Program (NCCP Program). CDFW offers the comments and recommendations presented below to assist the City of Fontana (City; the CEQA lead agency) in adequately identifying and/or mitigating the project's significant, or potentially significant, impacts on biological resources. The comments and recommendations are also offered to enable CDFW to adequately review and comment on the proposed project with respect to impacts on biological resources. CDFW recommends that the forthcoming DEIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the project, the DEIR should include a complete assessment of the flora and fauna within and adjacent to the project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats. CDFW recommends that the DEIR specifically include:

1. An assessment of the various habitat types located within the project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the project. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted at (916) 322-2493 or CNDDB@wildlife.ca.gov to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed project. CDFW recommends that CNDDB Field Survey Forms be completed and submitted to CNDDB to document survey results. Online forms can be obtained and submitted at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data

   Please note that the CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the project site.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish and Game Code § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the

project area and should not be limited to resident species. Focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed project may warrant periodic updated surveys for certain sensitive taxa, particularly if the project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

Based on CDFW's local biological knowledge of the project area, and review of CNDDB, the project site has a high potential to support both nesting and foraging habitat for burrowing owl (*Athene cunicularia*), a California Species of Special Concern. As such, CDFW recommends that City, during preparation of the DEIR, follow the recommendations and guidelines provided in the *Staff Report on Burrowing Owl Mitigation* (Department of Fish and Game, March 2012); available for download from the CDFW's website at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols

The Staff Report on Burrowing Owl Mitigation specifies that project impact evaluations include:

a. A habitat assessment;
b. Surveys; and
c. An impact assessment

As stated in the *Staff Report on Burrowing Owl Mitigation*, the three progressive steps are effective in evaluating whether a project will result in impacts to burrowing owls, and the information gained from the steps will inform any subsequent avoidance, minimization, and mitigation measures. Habitat assessments are conducted to evaluate the likelihood that a site supports burrowing owl. Burrowing owl surveys provide information needed to determine the potential effects of proposed projects and activities on burrowing owls, and to avoid take in accordance with Fish and Game Code sections 86, 3503, and 3503.5. Impact assessments evaluate the extent to which burrowing owls and their habitat may be impacted, directly or indirectly, on and within a reasonable distance of a proposed CEQA project activity or non-CEQA project.

4. A thorough, recent, floristic-based assessment of special status plants and natural communities, following the CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see https://www.wildlife.ca.gov/Conservation/Plants).

5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources
The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the project. To ensure that project impacts to biological resources are fully analyzed, the following information should be included in the DEIR:

1. A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other project activities adjacent to natural areas, exotic and/or invasive species, and drainage. The latter subject should address project-related changes on drainage patterns and water quality within, upstream, and downstream of the project site, including: volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site.

   With respect to defensible space: please ensure that the DEIR fully describes and identifies the location, acreage, and composition of defensible space *within* the proposed project footprint. Please ensure that any graphics and descriptions of defensible space associated with this project comply with San Bernardino County Fire (or other applicable agency) regulations/requirements. The County, through their planning processes, should be ensuring that defensible space is provided and accounted for *within proposed development areas*, and not transferred to adjacent open space or conservations lands.

2. A discussion of potential indirect project impacts on biological resources, including resources in areas adjacent to the project footprint, such as nearby public lands (e.g. National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Natural Community Conservation Plan, or other conserved lands).

   Please note that the Project area supports significant biological resources and contains habitat connections, providing for wildlife movement across the broader landscape, sustaining both transitory and permanent wildlife populations. CDFW encourages project design that avoids and preserves onsite features that contribute to habitat connectivity. The DEIR should include a discussion of both direct and indirect impacts to wildlife movement and connectivity, including maintenance of wildlife corridor/movement areas to adjacent undisturbed habitats.

3. An evaluation of impacts to adjacent open space lands from both the construction of the project and long-term operational and maintenance needs.

4. A cumulative effects analysis developed as described under CEQA Guidelines § 15130. Please include all potential direct and indirect project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

Alternatives Analysis

Note that the DEIR must describe and analyze a range of reasonable alternatives to the project that are potentially feasible, would "feasibly attain most of the basic objectives of the project," and would avoid or substantially lessen any of the project's significant effects (CEQA Guidelines § 15126.6[a]).

Mitigation Measures for Project Impacts to Biological Resources

The DEIR should include appropriate and adequate avoidance, minimization, and/or mitigation measures for all direct, indirect, and cumulative impacts that are expected to occur as a result of the construction and long-term operation and maintenance of the project. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Fully Protected Species*: Fully protected species may not be taken or possessed at any time. Project activities described in the DEIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the project area. CDFW also recommends that the DEIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that the Lead Agency include in the analysis how appropriate avoidance, minimization and mitigation measures will reduce indirect impacts to fully protected species.

2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The DEIR should include measures to

fully avoid and otherwise protect sensitive plant communities from project-related direct and indirect impacts.

3. *Mitigation*: CDFW considers adverse project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DEIR should include mitigation measures for adverse Project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement should be evaluated and discussed in detail. If onsite mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, offsite mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

   The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

   If burrowing owls and/or their habitat may be impacted from the project, CDFW recommends that the City include specific mitigation in the DEIR. CEQA Guidelines §15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center* v. *County* of *Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after Project approval. Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete *(Sundstrom* v. *County* of *Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry* v. *City* of *Murrieta (1995)* 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc.* v. *County* of *Orange* (2005) 131 Cal. App. 4th 777).

   CDFW recommends that the DEIR specify mitigation that is roughly proportional to the level of impacts, including cumulative impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). Furthermore, in order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions. Current scientific literature supports the conclusion that mitigation for permanent burrowing owl habitat loss necessitates replacement with an equivalent or greater habitat area for breeding, foraging, wintering, dispersal, presence of burrows, burrow surrogates, presence of fossorial mammal dens, well drained soils, and abundant and available prey within close proximity to the burrow.

4. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

   CDFW recommends that local onsite propagules from the project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in the near future in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various project components as appropriate.

   Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

5. *Nesting Birds and Migratory Bird Treaty Act:* Please note that it is the project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). In addition, sections 3503, 3503.5, and 3513 of the Fish and Game Code afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto; section 3503.5 states that is it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as

provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

CDFW recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: project phasing and timing, monitoring of project-related noise (where applicable), sound walls, and buffers, where appropriate. The DEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site. If pre-construction surveys are proposed in the DEIR, CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

6. *Moving out of Harm's Way:* The proposed project is anticipated to result in the clearing of natural habitats that support native species. To avoid direct mortality, CDFW recommends that the lead agency condition the DEIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Furthermore, it should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting project impacts associated with habitat loss.

7. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to the California Endangered Species Act (CESA). CDFW recommends that a CESA ITP be obtained if the project has the potential to result in "take" (California Fish and Game Code section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the project. CESA ITPs are issued to conserve, protect, enhance, and restore State-listed CESA species and their habitats.

CDFW encourages early consultation, as significant modification to the proposed project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. Please note that the proposed avoidance, minimization, and mitigation measures must be sufficient for CDFW to conclude that the project's impacts are fully mitigated and the measures, when taken in aggregate, must meet the full mitigation standard. The California Fish and Game Code requires that CDFW comply with CEQA for the issuance of a CESA ITP. CDFW recommends the DEIR address all Project impacts to listed and candidate species and specify a mitigation monitoring and reporting program that will meet the requirements of CESA.

Based on review of CNDDB, and knowledge of the project site/vicinity, CDFW is aware that the following CESA candidate species has high potential to occur onsite/have previously been reported onsite: *Bombus crotchii* (Crotch bumble bee).

Lake and Streambed Alteration Program

Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Upon receipt of a complete notification, CDFW determines if the proposed project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to

https://www.wildlife.ca.gov/Conservation/LSA/Forms.

Filing Fees

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

Additional Comments and Recommendations

The Project site falls within the City's 2004 North Fontana Conservation Program area. CDFW has expressed concerns and disagreement with the City's continued deferment of mitigation for impacts to sensitive alluvial habitats with the collection of mitigation fees (see enclosure: CDFW comment letter on DEIR for Monarch Hills Residential Development Project). As implemented, the North Fontana Conservation Program has failed to mitigate for the cumulative and temporal loss of over 375 acres of alluvial habitats and species associated with those habitats including Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), southern California legless lizard (*Anniella stebbinsi*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), coastal California gnatcatcher (*Polioptila californica californica*), and San Bernardino kangaroo rat (*Dipodomys merriami parvus*). The DEIR should thoroughly analyze the cumulative and temporal loss of alluvial habitats in the region and address how the Project will offset the continued loss of the remaining alluvial habitats prior to impacts.

To ameliorate the water demands of this project, CDFW recommends incorporation of water-wise concepts in project landscape design plans. In particular, CDFW recommends xeriscaping with locally native California species, and installing water-efficient and targeted irrigation systems (such as drip irrigation). Local water agencies/districts, and resource conservation districts in your area may be able to provide information on plant nurseries that carry locally native species, and some facilities display drought-tolerant locally native species demonstration gardens (for example the Riverside-Corona Resource Conservation District in Riverside). Information on drought-tolerant landscaping and water-efficient irrigation systems is available on the Department of Water Resources website: https://water.ca.gov/Water-Basics/Conservation-Tips/Plant-and-Landscape-Guide.

Further Coordination

CDFW appreciates the opportunity to comment on the NOP of a DEIR for the Sierra Avenue and Casa Grande Project (SCH No. 2019070040) and recommends that the City of Fontana address CDFW's comments and concerns in the forthcoming DEIR. CDFW is available to meet with the City early in the planning process, and attend a site visit for this project.

If you should have any questions pertaining to the comments provided in this letter, or wish to schedule a meeting and/or site visit, please contact Brandy Wood at (909) 483-6319 or at brandy.wood@willdife.ca.gov.

Sincerely,

Scott Wilson

Scott Wilson
Environmental Program Manager
Inland Deserts Region

Enclosure: CDFW comment letter on the DEIR for Monarch Hills Residential Development Project (SCH No. 2016101065, May 29, 2018)

Literature Cited

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/

August 7, 2019

Cecily Session-Goins
Assistant Planner
City of Fontana Planning Division
Fontana, CA 92335

Subject: Notice of Preparation of a Draft EIR for Sierra Avenue and Casa Grande Avenue Warehouse Project EIF

Dear Ms. Session-Goins:

Thank you for allowing the City of Rialto to comment on the contents of an EIR for the cited project. The project is located on the westerly edge of the City of Rialto and the Las Colinas community, so it could have significant impacts on the residents of our City. We received your notice on July 8, 2019 and we herewith submit this letter within the 30-day time limit.

Your list of issues identified in the NOP include aesthetics, GHG emissions, hazards and hazardous materials, noise, light/glare, and traffic which will be the primary issues of concern for the City of Rialto. Because of the proximity of industrial uses adjacent to residential uses, Rialto will review these reports closely to ensure land use compatibility and the implementation of appropriate mitigation measures. We have many instances of residential development adjacent to industrial development and design solutions can help make them compatible neighbors.

It was not noted in the NOP whether the project contemplates any change to the extension of Casa Grande into the City of Rialto. The City requests early consultation with the traffic engineer preparing the traffic analysis to ensure our understanding of the circulation proposal and to provide input into the modeling methodology. The impact upon Rialto's streets will depend upon the circulation.

The City requests a copy of the Draft EIR when completed. Please keep us informed of this project's progress.

Sincerely,

Daniel Rosas
Associate Planner

From: Jacqueline Perez
To: Cecily Session-Goins
Subject: Sierra Avenue and Casa Grande Avenue Warehouse Project-Resident concerns
Date: Monday, July 8, 2019 5:50:32 PM

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Dear Ms. Cecily Session-Goins,

This email is in response to the notification letter sent by your office regarding the Sierra Avenue and Casa Grande Avenue Warehouse Project.

I live in the community of Las Colinas on the other side of the wall where the proposed warehouse is said to be constructed. I have many concerns regarding having the warehouse in my backyard.

I moved to Las Colinas 18years ago and was told that the other side of the wall (Fontana) was zoned to build houses. There are to may warehouses the in the surrounding areas and now they are being considered to have them constructed adjacent to homes and future homes that are new and currently being constructed. I have spoken to several builders in the nearby area where they are building new homes and to their surprise, they haven't heard about the proposed Project for the warehouse.

Here are the cons of building this warehouse:

1. Traffic congestion-2 lane road on Sierra. (there have been many accidents)
2. Tracker trailers coming in and out of the warehouses for deliveries.
3. Opening Casa Grande should be for our residents to enter in and out of our community. It's amazing how 18+ years ago they were going to open Casa Grande and it never happened because they stated that there would be congestion coming in and out of the community and many will not be residents coming through the neighborhood. So now how convenient that because of this project they now want to open Casa Grande.
4. Lowers property values.
5. Higher noise levels
6. Environmentally unsafe-fumes
7. An elementary school down the street
8. Damage roads
9. High amounts of traffic at the end of each shift

The question I pose to you, if you were in our shoes would you want this to happen to you, family or friends? My husband passed a little over a year. My husband loved his home and he loved the views from our backyard. Just to think to replace our beautiful views with a

warehouse it literally saddens me tremendously.

Many of our neighbors are not happy about this and will also be sending emails or will be present at the meeting.

I use to live in Fontana in the area of Heritage, and I was happy to be a resident of Fontana because of their growth and community. We ask that this warehouse be relocated along with other warehouses not adjacent to homes. We want our children to live in a community where they can breathe fresh air and be safe from traffic.

I thank you for your time and would greatly appreciate your feedback.

Thank you.

Jacqueline Perez
(909) 641-9427

From: Jimmy Barela
To: Cecily Session-Goins
Subject: Sierra Ave and Casa Grande PROPOSED Warehouse.
Date: Saturday, July 6, 2019 10:49:09 PM

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How do I go about speaking my mind regarding the proposed amendment from R-MFH to R-MU. I live in the Las Colinas area, and I do not want the area switched to warehouse land. I do know of the 24th meeting.

From: Stacey Oborne
To: Cecily Session-Goins
Cc: "Komalpreet Toor"
Subject: Sierra Avenue and Casa Grande Avenue Warehouse Project (SCH 2019070040)
Date: Wednesday, July 3, 2019 6:54:16 PM

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Good Afternoon Ms. Session-Goins,

Who is the applicant for this project?

Respectfully,
Stacey

Stacey Oborne
Paralegal
Lozeau | Drury LLP
1939 Harrison Street, Suite 150
Oakland, CA 94612
510-836-4200 (Phone)
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richard@lozeaudrury.com

Via Email and U.S. Mail

July 9, 2019

Cecily Session-Goins, Assistant Planner
Community Development Dept.
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335
CSGoins@fontana.org

Zai AbuBakar, Director
Community Development Dept.
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335
zabubakar@fontana.org

Tonia Lewis, City Clerk
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335
tlewis@fontana.org

Re: CEQA and Land Use Notice Request for the Sierra Avenue and Casa Grande Avenue Warehouse Project (GPA No. 18-006; ZCA No. 18-006; ZCA No. 18-007)

Dear Ms. Session-Goins, Ms. AbuBakar, and Ms. Lewis:

I am writing on behalf of Supporters Alliance for Environmental Responsibility ("SAFER") and its members living in the City of Fontana and/or San Bernardino County, regarding the Sierra Avenue and Casa Grande Avenue Warehouse Project (GPA No. 18-006; ZCA No. 18-006; ZCA No. 18-007), including all actions referring or related to the proposed development of a 317,820-square foot warehouse on three parcels totaling 16.76 acres at the northeastern corner of Sierra Avenue and Casa Grande Avenue in the City of Fontana ("Project").

We hereby request that the City of Fontana ("City") send by electronic mail, if possible, or U.S. Mail to our firm at the address below notice of any and all actions or hearings related to activities undertaken, authorized, approved, permitted, licensed, or certified by the City and any of its subdivisions, and/or supported, in whole or in part, through contracts, grants, subsidies, loans or other forms of assistance from the City, including, but not limited to the following:

- Notice of any public hearing in connection with the Project as required by California Planning and Zoning Law pursuant to Government Code Section 65091.
- Any and all notices prepared for the Project pursuant to the California Environmental Quality Act ("CEQA"), including, but not limited to:
    - Notices of any public hearing held pursuant to CEQA.
    - Notices of determination that an Environmental Impact Report ("EIR") is required for the Project, prepared pursuant to Public Resources Code Section 21080.4.
    - Notices of any scoping meeting held pursuant to Public Resources Code Section 21083.9.

- Notices of preparation of an EIR or a negative declaration for the Project, prepared pursuant to Public Resources Code Section 21092.
- Notices of availability of an EIR or a negative declaration for the Project, prepared pursuant to Public Resources Code Section 21152 and Section 15087 of Title 14 of the California Code of Regulations.
- Notices of approval and/or determination to carry out the Project, prepared pursuant to Public Resources Code Section 21152 or any other provision of law.
- Notices of any addenda prepared to a previously certified or approved EIR.
- Notices of approval or certification of any EIR or negative declaration, prepared pursuant to Public Resources Code Section 21152 or any other provision of law.
- Notices of determination that the Project is exempt from CEQA, prepared pursuant to Public Resources Code section 21152 or any other provision of law.
- Notice of any Final EIR prepared pursuant to CEQA.
- Notice of determination, prepared pursuant to Public Resources Code Section 21108 or Section 21152.

Please note that we are requesting notices of CEQA actions and notices of any public hearings to be held under any provision of Title 7 of the California Government Code governing California Planning and Zoning Law. **This request is filed pursuant to Public Resources Code Sections 21092.2 and 21167(f), and Government Code Section 65092**, which requires agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

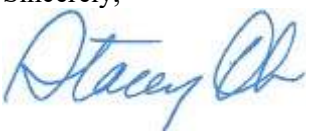
In addition, we request that the City send to us via email, if possible or U.S. Mail a copy of all Planning Commission and City Council meetings and/or hearing agendas.

Please send notice by electronic mail, if possible, or U.S. Mail to:

Richard Drury
Komalpreet Toor
Stacey Oborne
Lozeau Drury LLP
1939 Harrison Street, Suite 150
Oakland, CA 94612
richard@lozeaudrury.com
komal@lozeaudrury.com
stacey@lozeaudrury.com

Please call if you have any questions. Thank you for your attention to this matter.

Sincerely,



Stacey Oborne
Paralegal
Lozeau | Drury LLP

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

July 23, 2019 **VIA EMAIL**

Ms. Cecily Session-Goins
Assistant Planner
City of Fontana Planning Division
8353 Sierra Avenue
Fontana, CA 92335

Dear Ms. Session-Goins:

Notice of Preparation for an Environmental Impact Report
for the Sierra Avenue and Casa Grande Avenue Warehouse Project

The Metropolitan Water District of Southern California (Metropolitan) reviewed the Notice of Preparation for an Environmental Impact Report for the Sierra Avenue and Casa Grande Avenue Warehouse Project (Project). The proposed Project consists of the development of a 317,820 square-foot warehouse located at the northeastern corner of Sierra Avenue and Casa Grande Avenue, in the City of Fontana. The warehouse will be built within three connected parcels (Assessor Parcel Numbers (APNs): 0239-151-22, 0239-151-34, and 0239-151-40). The Project proposes to amend the general plan to convert multi-family high-density residential land to regional mixed use land designation, and a zoning change for the warehouse overlay. The City of Fontana is the CEQA Lead Agency for the Project. This letter contains Metropolitan's comments as a potentially affected public agency.

Metropolitan is a public agency and regional water wholesaler. It is comprised of 26 member public agencies, serving approximately 19 million people in portions of six counties in Southern California, including Orange County. Metropolitan's mission is to provide its 5,200 square mile service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Our review of the Notice indicates that Metropolitan owns and operates a facility near the boundaries of the proposed project location. Metropolitan's Rialto Pipeline, which is a 120- inch diameter pipeline, runs in a west-easterly direction and is located within our fee property. The enclosed map shows these rights-of-way in relation to the proposed project. It will be necessary for the City to consider these facilities in its project planning.

Metropolitan must be allowed to maintain its rights-of-way and requires unobstructed access to its facilities in order to maintain and repair its system. In order to avoid potential conflicts with

Metropolitan's facilities and rights-of-way, we require that any design plans for any activity in the area of Metropolitan's pipelines or facilities be submitted for our review and written approval. Metropolitan will not permit procedures that could subject the pipeline to excessive vehicle, impact or vibratory loads. Any future design plans associated with this project should be submitted to Metropolitan's Substructures Team. Approval of the project should be contingent on Metropolitan's approval of design plans for portions of the proposed project that could impact its facilities.

Detailed prints of drawings of Metropolitan's pipelines and rights-of-way may be obtained by calling Metropolitan's Substructures Information Line at (213) 217-7663. To assist the applicant in preparing plans that are compatible with Metropolitan's facilities and easements, attached are the "Guidelines for Improvements and Construction Projects Proposed in the Area of Metropolitan's Facilities and Rights-of-Way". Please note that all submitted designs or plans must clearly identify Metropolitan's facilities and rights-of-way.

Additionally, Metropolitan encourages projects within its service area to include water conservation measures. Water conservation, reclaimed water use, and groundwater recharge programs are integral components to regional water supply planning. Metropolitan supports mitigation measures such as using water efficient fixtures, drought-tolerant landscaping, and reclaimed water to offset any increase in water use associated with the proposed project.
We appreciate the opportunity to provide input to your planning process and we look forward to receiving future documentation and plans for this project. For further assistance, please contact Ms. Jolene Ditmar at (213) 217-6184 or jditmar@mwdh2o.com.

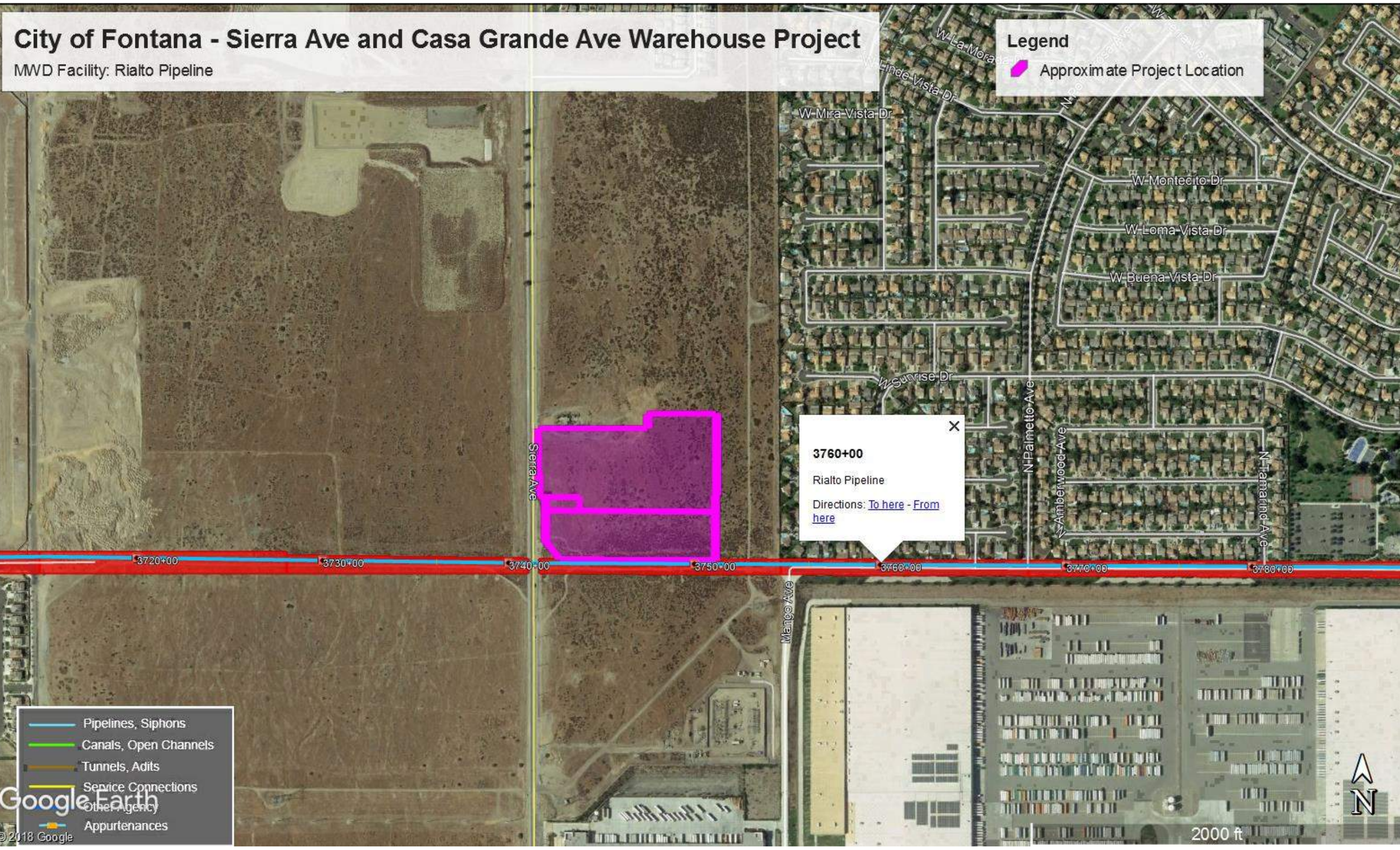
Very truly yours,

Sean Carlson
Interim Team Manager, Environmental Planning Section

JD:ds
Sharepoint\City of Fontana - Sierra Avenue and Casa Grande Avenue Warehouse Project_Comment Letter

Enclosures:

(1) Map
(2) Guidelines for Improvements and Construction Projects Proposed in the Area of Metropolitan's Facilities and Rights-of-Way


City of Fontana - Sierra Ave and Casa Grande Ave Warehouse Project
MWD Facility: Rialto Pipeline
Legend
Approximate Project Location
W La Mora Ave
W Linda Vista Dr
W Mira Vista Dr
W Montecito Dr
W Loma Vista Dr
W Buena Vista Dr
W Sunrise Dr
N Palmetto Ave
W Amberwood Ave
N Tamarind Ave
Sierra Ave
Mango Ave
3760+00
Rialto Pipeline
Directions: To here - From here
3720+00
3730+00
3740+00
3750+00
3760+00
3770+00
3780+00
Pipelines, Siphons
Canals, Open Channels
Tunnels, Adits
Service Connections
Other Agency
Appurtenances
Google Earth
© 2018 Google
2000 ft
N

Guidelines for Improvements and Construction Projects Proposed in the Area of Metropolitan's Facilities and Rights-of-Way

July 2018

Prepared By:
The Metropolitan Water District of Southern California
Substructures Team, Engineering Services
700 North Alameda Street
Los Angeles, California 90012

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Additional Copies: To obtain a copy of this document, please contact the Engineering Services Group, Substructures Team.

Disclaimer

Metropolitan assumes no responsibility for the accuracy of the substructure information herein provided. The user assumes responsibility for verifying substructure locations before excavating and assumes all liability for damage to Metropolitan's facilities as a result of such excavation. Additionally, the user is cautioned to conduct surveys and other field investigations as deemed prudent, to assure that project plans are correct. The appropriate representative from Metropolitan must be contacted at least two working days, before any work activity in proximity to Metropolitan's facilities.

It generally takes 30 days to review project plans and provide written responses. Metropolitan reserves the right to modify requirements based on case-specific issues and regulatory developments.

PUBLICATION HISTORY:

Initial Release	*July 2018*

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1.0 GENERAL INFORMATION

Note: Underground Service Alert at 811 must be notified at least two working days before excavating in proximity to Metropolitan's facilities.

1.1 Introduction

These guidelines provide minimum design and construction requirements for any utilities, facilities, developments, and improvements, or any other projects or activities, proposed in or near Metropolitan Water District of Southern California (Metropolitan) facilities and rights-of-way. Additional conditions and stipulations may also be required depending on project and site specific conditions. Any adverse impacts to Metropolitan's conveyance system, as determined by Metropolitan, will need to be mitigated to its satisfaction.

All improvements and activities must be designed so as to allow for removal or relocation at builder or developer expense, as set forth in the paramount rights provisions of Section 20.0. Metropolitan shall not be responsible for repair or replacement of improvements, landscaping or vegetation in the event Metropolitan exercises its paramount rights powers.

1.2 Submittal and Review of Project Plans/Utilities and Maps

Metropolitan requires project plans/utilities be submitted for all proposed activities that may impact Metropolitan's facilities or rights-of-way. Project plans shall include copies of all pertinent utilities, sewer line, storm drain, street improvement, grading, site development, landscaping, irrigation and other plans, all tract and parcel maps, and all necessary state and federal environmental documentation. Metropolitan will review the project plans and provide written approval, as it pertains to Metropolitan's facilities and rights-of-way. Written approval from Metropolitan must be obtained, prior to the start of any activity or construction in the area of Metropolitan's facilities or rights-of-way. Once complete project plans and supporting documents are submitted to Metropolitan, it generally takes 30 days to review and to prepare a detailed written response. Complex engineering plans that have the potential for significant impacts on Metropolitan's facilities or rights-of-way may require a longer review time.

Project plans, maps, or any other information should be submitted to Metropolitan's Substructures Team at the following mailing address:

Attn: Substructures Team
The Metropolitan Water District of Southern California
700 North Alameda St.
Los Angeles, CA 90012

General Mailing Address: **P.O. Box 54153**
Los Angeles, CA 90054-0153

Email: EngineeringSubstructures@mwdh2o.com

For additional information, or to request prints of detailed drawings for Metropolitan's facilities and rights-of-way, please contact Metropolitan's Substructures Team at 213-217-7663 or EngineeringSubstructures@mwdh2o.com.

1.3 Identification of Metropolitan's Facilities and Rights-of-Way

Metropolitan's facilities and rights-of-way must be fully shown and identified as Metropolitan's, with official recording data, on the following:

A. All applicable plans

B. All applicable tract and parcel maps

Metropolitan's rights-of-ways and existing survey monuments must be tied dimensionally to the tract or parcel boundaries. Metropolitan's Records of Survey must be referenced on the tract and parcel maps with the appropriate Book and Page.

2.0 General Requirements

2.1 Vehicular Access

Metropolitan must have vehicular access along its rights-of-way at all times for routine inspection, patrolling, operations, and maintenance of its facilities and construction activities. All proposed improvements and activities must be designed so as to accommodate such vehicular access.

2.2 Fences

Fences installed across Metropolitan's rights-of-way must include a 16-foot-wide gate to accommodate vehicular access by Metropolitan. Additionally, gates may be required at other specified locations to prevent unauthorized entry into Metropolitan's rights-of-way.

All gates must accommodate a Metropolitan lock or Knox-Box with override switch to allow Metropolitan unrestricted access. There should be a minimum 20-foot setback for gates from the street at the driveway approach. The setback is necessary to allow Metropolitan vehicles to safely pull off the road prior to opening the gate.

2.3 Driveways and Ramps

Construction of 16-foot-wide commercial-type driveway approaches is required on both sides of all streets that cross Metropolitan's rights-of-way. Access ramps, if necessary, must be a minimum of 16 feet wide.

There should be a minimum 20-foot setback for gates from the street at the driveway approach. Grades of ramps and access roads must not exceed 10 percent; if the slope of an access ramp or road must exceed 10 percent due to topography, then the ramp or road must be paved.

2.4 Walks, Bike Paths, and Trails

All walkways, bike paths, and trails along Metropolitan's rights-of-way must be a minimum 12-foot wide and have a 50-foot or greater radius on all horizontal curves if also used as Metropolitan's access roads. Metropolitan's access routes, including all walks and drainage facilities crossing the access routes, must be constructed to American Association of State Highway and Transportation Officials (AASHTO) H-20 loading standards (see Figure 1). Additional requirements will be placed on equestrian trails to protect the water quality of Metropolitan's pipelines and facilities.

2.5 Clear Zones

A 20-foot-wide clear zone is required to be maintained around Metropolitan's manholes and other above-ground facilities to accommodate vehicular access and maintenance. The clear zone should slope away from Metropolitan's facilities on a grade not to exceed 2 percent.

2.6 Slopes

Cut or fill slopes proposed within Metropolitan's rights-of-way must not exceed 10 percent. The proposed grade must not worsen the existing condition. This restriction is required to facilitate Metropolitan use of construction and maintenance equipment and allow uninhibited access to above-ground and below-ground facilities.

2.7 Structures

Construction of structures of any type is not allowed within the limits of Metropolitan's rights-of-way to avoid interference with the operation and maintenance of Metropolitan's facilities and possible construction of future facilities.

Footings and roof eaves of any proposed buildings adjacent to Metropolitan's rights-of-way must meet the following criteria:

A. Footings and roof eaves must not encroach onto Metropolitan's rights-of-way.

B. Footings must not impose any additional loading on Metropolitan's facilities.

C. Roof eaves must not overhang onto Metropolitan's rights-of-way.

Detailed plans of footings and roof eaves adjacent to Metropolitan's rights-of-way must be submitted for Metropolitan's review and written approval, as pertains to Metropolitan's facilities.

2.8 Protection of Metropolitan Facilities

Metropolitan facilities within its rights-of-way, including pipelines, structures, manholes, survey monuments, etc., must be protected from damage by the project proponent or property owner, at no expense to Metropolitan. The exact location, description and method of protection must be shown on the project plans.

2.9 Potholing of Metropolitan Pipelines

Metropolitan's pipelines must be potholed in advance, if the vertical clearance between a proposed utility and Metropolitan's pipeline is indicated to be 4 feet or less. A Metropolitan representative must be present during the potholing operation and will assist in locating the pipeline. Notice is required, a minimum of three working days, prior to any potholing activity.

2.10 Jacked Casings or Tunnels

A. General Requirements

Utility crossings installed by jacking, or in a jacked casing or tunnel under/over a Metropolitan pipeline, must have at least 3 feet of vertical clearance between the outside diameter of the pipelines and the jacked pipe, casing, or tunnel. The actual

cover over Metropolitan's pipeline shall be determined by potholing, under Metropolitan's supervision.

Utilities installed in a jacked casing or tunnel must have the annular space between the utility and the jacked casing or tunnel filled with grout. Provisions must be made for grouting any voids around the exterior of the jacked pipe, casing, or tunnel.

B. Jacking or Tunneling Procedures

Detailed jacking, tunneling, or directional boring procedures must be submitted to Metropolitan for review and approval. The procedures must cover all aspects of operation, including, but not limited to, dewatering, ground control, alignment control, and grouting pressure. The submittal must also include procedures to be used to control sloughing, running, or wet ground, if encountered. A minimum 10-foot clearance must be maintained between the face of the tunneling or receiving pits and outside edges of Metropolitan's facility.

C. Shoring

Detailed drawings of shoring for jacking or receiving pits must be submitted to Metropolitan for review and written-approval. (See Section 10 for shoring requirements).

D. Temporary Support

Temporary support of Metropolitan's pipelines may be required when a utility crosses under a Metropolitan pipeline and is installed by means of an open trench. Plans for temporary support must be reviewed and approved in writing by Metropolitan. (See Section 11, Supports of Metropolitan Facilities).

3.0 Landscaping

3.1 Plans

All landscape plans must show the location and limits of Metropolitan's right-of-way and the location and size of Metropolitan's pipeline and related facilities therein. All landscaping and vegetation shall be subject to removal without notice, as may be required by Metropolitan for ongoing maintenance, access, repair, and construction activities. Metropolitan will not be financially responsible for the removal of any landscaping and vegetation.

3.2 Drought-Tolerant Native and California Friendly Plants

Metropolitan recommends use of drought-tolerant native and California Friendly® plants (excluding sensitive plants) on proposed projects. For more information regarding California Friendly® plants refer to www.bewaterwise.com.

3.3 Trees

Trees are generally prohibited within Metropolitan's rights-of-way as they restrict Metropolitan's ability to operate, maintain and/or install new pipeline(s) located within these rights-of-way. Metropolitan will not be financially responsible for the removal and replacement of any existing trees should they interfere with access and any current or future Metropolitan project located within the right-of-way.

3.4 Other Vegetation

Shrubs, bushes, vines, and groundcover are generally allowed within Metropolitan's rights-of-way. Larger shrubs are not allowed on Metropolitan fee properties; however, they may be allowed within its easements if planted no closer than 15 feet from the outside edges of existing or future Metropolitan facilities. Only groundcover is allowed to be planted directly over Metropolitan pipeline, turf blocks or similar is recommended to accommodate our utility vehicle access. Metropolitan will not be financially responsible for the removal and replacement of the vegetation should it interfere with access and any current or future Metropolitan project.

3.5 Irrigation

Irrigation systems are acceptable within Metropolitan's rights-of-way, provided valves and controllers are located near the edges of the right-of-way and do not interfere with Metropolitan vehicular access. A shutoff valve should also be located along the edge of the right-of-way that will allow the shutdown of the system within the right-of-way should Metropolitan need to do any excavation. No pooling or saturation of water above Metropolitan's pipeline and right-of-way is allowed. Additional restrictions apply to non-potable water such as Recycled Water and are covered on Table 3 of Page 20.

3.6 Metropolitan Vehicular Access

Landscape plans must show Metropolitan vehicular access to Metropolitan's facilities and rights-of-way and must be maintained by the property owner or manager or homeowners association at all times. Walkways, bike paths, and trails within Metropolitan's rights-of-way may be used as Metropolitan access routes. (See Section 2.4, Walks, Bike Paths, and Trails).

4.0 General Utilities

Note: For non-potable piping like sewer, hazardous fluid, storm drain, disinfected tertiary recycled water and recycled water irrigation see Table 1 through Table 3.

4.1 Utility Structures

Permanent utility structures (e.g., manholes, power poles, pull boxes, electrical vaults, etc.) are not allowed within Metropolitan's rights-of-way. Metropolitan requests that all permanent utility structures within public streets be placed as far from its pipelines and facilities as practical, but not closer than 5 feet from the outside edges of Metropolitan facilities.

Note: Non-potable utility pipelines are an exception to the 5-foot minimum clearance. Non-potable utility pipelines should have 10 feet of separation.

4.2 Utility Crossings

Metropolitan requests a minimum of 1 foot of vertical clearance between Metropolitan's pipeline and any utility crossing the pipeline. Utility lines crossing Metropolitan's pipelines must be as perpendicular to the pipeline as possible. Cross-section drawings, showing proposed locations and elevations of utility lines and locations of Metropolitan's pipelines and limits of rights-of-way, must be submitted with utility plans, for all

crossings. Metropolitan's pipeline must be potholed under Metropolitan's supervision at the crossings (See Section 2.9).

4.3 Longitudinal Utilities

Installation of longitudinal utilities is generally not allowed along Metropolitan's rights-of-way. Within public streets, Metropolitan requests that all utilities parallel to Metropolitan's pipelines and appurtenant structures (facilities) be located as far from the facilities as possible, with a minimum clearance of 5 feet from the outside edges of the pipeline.

Note: Non-potable utility pipelines are an exception to the 5-foot minimum clearance. Non-potable utility pipelines should have 10 feet of separation (for more information See Table 1 on Page 18).

4.4 Underground Electrical Lines

Underground electrical conduits (110 volts or greater) which cross a Metropolitan's pipeline must have a minimum of 1 foot of vertical clearance between Metropolitan's pipeline and the electrical lines. Longitudinal electrical lines, including pull boxes and vaults, in public streets should have a minimum separation of 5 feet from the edge of a Metropolitan pipeline or structures.

4.5 Fiber Optic Lines

Fiber optic lines installed by directional boring require a minimum of 3 feet of vertical clearance when boring is over Metropolitan's pipelines and a minimum of 5 feet of vertical clearance when boring is under Metropolitan's pipelines. Longitudinal fiber optic lines, including pull boxes, in public streets should have a minimum separation of 5 feet from the edge of a Metropolitan pipelines or structures. Potholing must be performed, under Metropolitan's supervision, to verify the vertical clearances are maintained.

4.6 Overhead Electrical and Telephone Lines

Overhead electrical and telephone lines, where they cross Metropolitan's rights-of-way, must have a minimum 35 feet of clearance, as measured from the ground to the lowest point of the overhead line. Overhead electrical lines poles must be located at least 30 feet laterally from the edges of Metropolitan's facilities or outside Metropolitan's right-of-way, whichever is greater.

Longitudinal overhead electrical and or telephone lines in public streets should have a minimum separation of 10 feet from the edge of a Metropolitan pipelines or structures where possible.

4.7 Sewage Disposal Systems

Sewage disposal systems, including leach lines and septic tanks, must be a minimum of 100 feet from the outside limits of Metropolitan's rights-of-way or the edge of its facilities, whichever is greater. If soil conditions are poor, or other adverse site-specific conditions exist, a minimum distance of 150 feet is required. They must also comply with local and state health code requirements as they relate to sewage disposal systems in proximity to major drinking water supply pipelines.

4.8 Underground Tanks

Underground tanks containing hazardous materials must be a minimum of 100 feet from the outside limits of Metropolitan's rights-of-way or edge of its facilities, whichever is greater. In addition, groundwater flow should be considered with the placement of underground tanks down-gradient of Metropolitan's facilities.

5.0 Specific Utilities: Non-Potable Utility Pipelines

In addition to Metropolitan's general requirements, installation of non-potable utility pipelines (e.g., storm drains, sewers, and hazardous fluids pipelines) in Metropolitan's rights-of-way and public street rights-of-way must also conform to the State Water Resources Control Board's Division of Drinking Water (DDW) regulation (Waterworks Standards) and guidance for separation of water mains and non-potable pipelines and to applicable local county health code requirements. Written approval is required from DDW for the implementation of alternatives to the Waterworks Standards and, effective December 14, 2017, requests for alternatives to the Waterworks Standards must include information consistent with: DDW's Waterworks Standards Main Separation Alternative Request Checklist.

In addition to the following general guidelines, further review of the proposed project must be evaluated by Metropolitan and requirements may vary based on site specific conditions.

A. Sanitary Sewer and Hazardous Fluids (General Guideline See Table 1 on Page 18)

B. Storm Drain and Recycled Water (General Guideline See Table 2 on Page 19)

C. Irrigation with Recycled Water (General Guideline See Table 3 on Page 20)

D. Metropolitan generally does not allow Irrigation with recycled water to be applied directly above its treated water pipelines

E. Metropolitan requests copies of project correspondence with regulating agencies (e.g., Regional Water Quality Control Board, DDW); regarding the application of recycled water for all projects located on Metropolitan's rights-of-way

6.0 Cathodic Protection/Electrolysis Test Stations

6.1 Metropolitan Cathodic Protection

Metropolitan's existing cathodic protection facilities in the vicinity of any proposed work must be identified prior to any grading or excavation. The exact location, description, and type of protection must be shown on all project plans. Please contact Metropolitan for the location of its cathodic protection stations.

6.2 Review of Cathodic Protection Systems

Metropolitan must review any proposed installation of impressed-current cathodic protection systems on pipelines crossing or paralleling Metropolitan's pipelines to determine any potential conflicts with Metropolitan's existing cathodic protection system.

7.0 Drainage

7.1 Drainage Changes Affecting Metropolitan Rights-of-Way

Changes to existing drainage that could affect Metropolitan's rights-of-way require Metropolitan's approval. The project proponent must provide acceptable solutions to ensure Metropolitan's rights-of-way are not negatively affected by changes in the drainage conditions. Plans showing the changes, with a copy of a supporting hydrology report and hydraulic calculations, must be submitted to Metropolitan for review and approval. Long term maintenance of any proposed drainage facilities must be the responsibility of the project proponent, City, County, homeowner's association, etc., with a clear understanding of where this responsibility lies. If drainage must be discharged across Metropolitan's rights-of-way, it must be carried across by closed conduit or lined open channel and must be shown on the plans.

7.2 Metropolitan's Blowoff and Pumpwell Structures

Any changes to the existing local watercourse systems will need to be designed to accommodate Metropolitan's blowoff and pumpwell structures, which periodically convey discharged water from Metropolitan's blowoff and pumping well structures during pipeline dewatering. The project proponents' plans should include details of how these discharges are accommodated within the proposed development and must be submitted to Metropolitan for review and approval. Any blowoff discharge lines impacted must be modified accordingly at the expense of the project proponent.

8.0 Grading and Settlement

8.1 Changes in Cover over Metropolitan Pipelines

The existing cover over Metropolitan's pipelines must be maintained unless Metropolitan determines that proposed changes in grade and cover do not pose a hazard to the integrity of the pipeline or an impediment to its maintenance capability. Load and settlement or rebound due to change in cover over a Metropolitan pipeline or ground in the area of Metropolitan's rights-of-way will be factors considered by Metropolitan during project review.

In general, the minimum cover over a Metropolitan pipeline is 4 feet and the maximum cover varies per different pipeline. Any changes to the existing grade may require that Metropolitan's pipeline be potholed under Metropolitan's supervision to verify the existing cover.

8.2 Settlement

Any changes to the existing topography in the area of Metropolitan's pipeline or right-of-way that result in significant settlement or lateral displacement of Metropolitan's pipelines are not acceptable. Metropolitan may require submittal of a soils report showing the predicted settlement of the pipeline at 10-foot intervals for review. The data must be carried past the point of zero change in each direction and the actual size and varying depth of the fill must be considered when determining the settlement. Possible settlement due to soil collapse, rebound and lateral displacement must also be included.

In general, the typical maximum allowed deflection for Metropolitan's pipelines must not exceed a deflection of 1/4-inch for every 100 feet of pipe length. Metropolitan may require additional information per its Geotechnical Guidelines. Please contact Metropolitan's Substructures Team for a copy of the Geotechnical Guidelines.

9.0 Construction Equipment

9.1 Review of Proposed Equipment

Use of equipment across or adjacent to Metropolitan's facilities is subject to prior review and written approval by Metropolitan. Excavation, backfill, and other work in the vicinity of Metropolitan's facilities must be performed only by methods and with equipment approved by Metropolitan. A list of all equipment to be used must be submitted to Metropolitan a minimum of 30 days before the start of work.

A. For equipment operating within paved public roadways, equipment that imposes loads not greater than that of an AASHTO H-20 vehicle (see Figure 1 on Page 21) may operate across or adjacent to Metropolitan's pipelines provided the equipment operates in non-vibratory mode and the road remains continuously paved.

B. For equipment operating within unpaved public roadways, when the total cover over Metropolitan's pipeline is 10 feet or greater, equipment imposing loads no greater than those imposed by an AASHTO H-20 vehicle may operate over or adjacent to the pipeline provided the equipment is operated in non-vibratory mode. For crossings, vehicle path shall be maintained in a smooth condition, with no breaks in grade for 3 vehicle lengths on each side of the pipeline.

9.2 Equipment Restrictions

In general, no equipment may be used closer than 20 feet from all Metropolitan above-ground structures. The area around the structures should be flagged to prevent equipment encroaching into this zone.

9.3 Vibratory Compaction Equipment

Vibratory compaction equipment may not be used in vibratory mode within 20 feet of the edge of Metropolitan's pipelines.

9.4 Equipment Descriptions

The following information/specifications for each piece of equipment should be included on the list:

A. A description of the equipment, including the type, manufacturer, model year, and model number. For example, wheel tractor-scraper, 1990 Caterpillar 627E.

B. The empty and loaded total weight and the corresponding weight distribution. If equipment will be used empty only, it should be clearly stated.

C. The wheel base (for each axle), tread width (for each axle), and tire footprint (width and length) or the track ground contact (width and length), and track gauge (center to center of track).

10.0 Excavations Close to Metropolitan Facilities

10.1 Shoring Design Submittal

Excavation that impacts Metropolitan's facilities requires that the contractor submit an engineered shoring design to Metropolitan for review and acceptance a minimum of 30 days before the scheduled start of excavation. Excavation may not begin until the shoring design is accepted in writing by Metropolitan.

Shoring design submittals must include all required trenches, pits, and tunnel or jacking operations and related calculations. Before starting the shoring design, the design engineer should consult with Metropolitan regarding Metropolitan's requirements, particularly as to any special procedures that may be required.

10.2 Shoring Design Requirements

Shoring design submittals must be stamped and signed by a California registered civil or structural engineer. The following requirements apply:

A. The submitted shoring must provide appropriate support for soil adjacent to and under Metropolitan's facilities.

B. Shoring submittals must include detailed procedures for the installation and removal of the shoring.

C. Design calculations must follow the Title 8, Chapter 4, Article 6 of the California Code of Regulations (CCR) guidelines. Accepted methods of analysis must be used.

D. Loads must be in accordance with the CCR guidelines or a soils report by a geotechnical consultant.

E. All members must be secured to prevent sliding, falling, or kickouts.

Metropolitan's pipelines must be located by potholing under Metropolitan's supervision before the beginning construction. Use of driven piles within 20 feet of the centerline of Metropolitan's pipeline is not allowed. Piles installed in drilled holes must have a minimum 2-foot clearance between Metropolitan's pipeline and the edge of the drilled hole, and a minimum of 1-foot clearance between any part of the shoring and Metropolitan's pipeline.

11.0 Support of Metropolitan Facilities

11.1 Support Design Submittal

If temporary support of a Metropolitan facility is required, the contractor shall submit a support design plan to Metropolitan for review and approval a minimum of 30 days before the scheduled start of work. Work may not begin until the support design is approved in writing by Metropolitan. Before starting design, the design engineer should consult with Metropolitan regarding Metropolitan's requirements.

11.2 Support Design Requirements

Support design submittals must be prepared, stamped, and signed by a California registered civil or structural engineer. The following requirements apply:

A. Support drawings must include detailed procedures for the installation and removal of the support system.

B. Design calculations must follow accepted practices, and accepted methods of analysis must be used.

C. Support designs must show uniform support of Metropolitan's facilities with minimal deflection.

D. The total weight of the facility must be transferred to the support system before supporting soil is fully excavated.

E. All members must be secured to prevent sliding, falling, or kickouts.

12.0 Backfill

12.1 Metropolitan Pipeline Not Supported

In areas where a portion of Metropolitan pipeline is not supported during construction, the backfill under and to an elevation of 6 inches above the top of the pipeline must be one-sack minimum cement sand slurry. To prevent adhesion of the slurry to Metropolitan's pipeline, a minimum 6-mil-thick layer of polyethylene sheeting or similar approved sheeting must be placed between the concrete support and the pipeline.

12.2 Metropolitan Pipeline Partially Exposed

In areas where a Metropolitan pipeline is partially exposed during construction, the backfill must be a minimum of 6 inches above the top of the pipeline with sand compacted to minimum 90 percent compaction.

12.3 Metropolitan Cut and Cover Conduit on Colorado River Aqueduct (CRA)

In areas where a Metropolitan cut and cover conduit is exposed, the following guidelines apply:

A. No vehicle or equipment shall operate over or cross the conduit when the cover is less than 3 feet.

B. Track-type dozer with a gross vehicle weight of 12,000 lbs or less may be used over the conduit when the cover is a minimum of 3 feet.

C. Wheeled vehicles with a gross vehicle weight of 8,000 lbs or less may operate over the conduit when the cover is a minimum of 4 feet.

D. Tracked dozer or wheeled vehicle should be used to push material over the conduit from the side.

E. Tracked dozer or wheeled vehicle should gradually increase cover on one side of the conduit and then cross the conduit and increase cover on the other side of the conduit. The cover should be increased on one side of the conduit until a maximum of 2 feet of fill has been placed. The cover over the conduit is not allowed to be more than 2 feet higher on one side of the conduit than on the other side.

F. The cover should be gradually increased over the conduit until the grade elevations have been restored.

13.0 Piles

13.1 Impacts on Metropolitan Pipelines

Pile support for structures could impose lateral, vertical and seismic loads on Metropolitan's pipelines. Since the installation of piles could also cause settlement of Metropolitan pipelines, a settlement and/or lateral deformation study may be required for pile installations within 50 feet of Metropolitan's pipelines. Metropolitan may require additional information per its Geo-technical Guidelines for pile installation. Please contact Metropolitan's Substructures Team for a copy of the Geotechnical Guidelines.

13.2 Permanent Cast-in-place Piles

Permanent cast-in-place piles must be constructed so that down drag forces of the pile do not act on Metropolitan's pipeline. The pile must be designed so that down drag forces are not developed from the ground surface to springline of Metropolitan's pipeline.

Permanent cast-in-place piles shall not be placed closer than 5 feet from the edge of Metropolitan's pipeline. Metropolitan may require additional information per its Geo-technical Guidelines for pile installation. Please contact Metropolitan's Substructures Team for a copy of the Geotechnical Guidelines.

14.0 Protective Slabs for Road Crossings Over Metropolitan Pipelines

Protective slabs must be permanent cast-in-place concrete protective slabs configured in accordance with Drawing SK-1 (See Figure 2 on Page 22).

The moments and shear for the protective slab may be derived from the American Association of State Highway and Transportation Officials (AASHTO). The following requirements apply:

A. The concrete must be designed to meet the requirements of AASHTO

B. Load and impact factors must be in accordance with AASHTO. Accepted methods of analysis must be used.

C. The protective slab design must be stamped and signed by a California registered civil or structural engineer and submitted to Metropolitan with supporting calculations for review and approval.

Existing protective slabs that need to be lengthened can be lengthened without modification, provided the cover and other loading have not been increased.

15.0 Blasting

At least 90 days prior to the start of any drilling for rock excavation blasting, or any blasting in the vicinity of Metropolitan's facilities, a site-specific blasting plan must be submitted to Metropolitan for review and approval. The plan must consist of, but not be limited to, hole diameters, timing sequences, explosive weights, peak particle velocities (PPV) at Metropolitan pipelines/structures, and their distances to blast locations. The PPV must be estimated based on a site-specific power law equation. The power law equation provides the peak particle velocity versus the scaled distance and must be calibrated based on measured values at the site.

16.0 Metropolitan Plan Review Costs, Construction Costs and Billing

16.1 Plan Review Costs

Metropolitan plan reviews requiring 8 labor hours or less are generally performed at no cost to the project proponent. Metropolitan plan reviews requiring more than 8 labor hours must be paid by the project proponent, unless the project proponent has superior rights at the project area. The plan review will include a written response detailing Metropolitan's comments, requirements, and/or approval.

A deposit of funds in the amount of the estimated cost and a signed letter agreement will be required from the project proponent before Metropolitan begins or continues a detailed engineering plan review that exceeds 8 labor hours.

16.2 Cost of Modification of Facilities Performed by Metropolitan

Cost of modification work conducted by Metropolitan will be borne by the project proponent, when Metropolitan has paramount/prior rights at the subject location.

Metropolitan will transmit a cost estimate for the modification work to be performed (when it has paramount/prior rights) and will require that a deposit, in the amount of the estimate, be received before the work will be performed.

16.3 Final Billing

Final billing will be based on the actual costs incurred, including engineering plan review, inspection, materials, construction, and administrative overhead charges calculated in accordance with Metropolitan's standard accounting practices. If the total cost is less than the deposit, a refund will be made; however, if the cost exceeds the deposit, an invoice for the additional amount will be forwarded for payment.

17.0 Street Vacations and Reservation of Easements for Metropolitan

A reservation of an easement is required when all or a portion of a public street where Metropolitan facilities are located is to be vacated. The easement must be equal to the street width being vacated or a minimum 40 feet. The reservation must identify Metropolitan as a "public entity" and not a "public utility," prior to recordation of the vacation or tract map. The reservation of an easement must be submitted to Metropolitan for review prior to final approval.

18.0 Metropolitan Land Use Guidelines

If you are interested in obtaining permission to use Metropolitan land (temporary or long term), a Land Use Form must be completed and submitted to Metropolitan for review and consideration. A nonrefundable processing fee is required to cover Metropolitan's costs for reviewing your request. Land Use Request Forms can be found at:

http://mwdh2o.com/PDF_Doing_Your_Business/4.7.1_Land_Use_Request_form_revised.pdf

The request should be emailed to RealEstateServices@mwdh2o.com,or contact the Real Property Development and Management (RPDM) Group at (213) 217-7750.

After the initial application form has been submitted, Metropolitan may require the following in order to process your request:

A. A map indicating the location(s) where access is needed, and the location & size (height, width and depth) of any invasive subsurface activity (boreholes, trenches, etc.).

B. The California Environmental Quality Act (CEQA) document(s) or studies that have been prepared for the project (e.g., initial study, notice of exemption, Environmental Impact Report (EIR), Mitigated Negative Declaration (MND), etc.).

C. A copy of an ACORD insurance certification naming Metropolitan as an additional insured, or a current copy of a statement of self-insurance.

D. Confirmation of the legal name of the person(s) or entity(ies) that are to be named as the permittee(s) in the entry permit.

E. Confirmation of the purpose of the land use.

F. The name of the person(s) with the authority to sign the documents and any specific signature title block requirements for that person or any other persons required to sign the document (i.e., legal counsel, Board Secretary/Clerk, etc.).

G. A description of any vehicles that will have access to the property. The exact make or model information is not necessary; however, the general vehicle type, expected maximum dimensions (height, length, width), and a specific maximum weight must be provided.

Land use applications and proposed use of the property must be compatible with Metropolitan's present and/or future use of the property. Any preliminary review of your request by Metropolitan shall not be construed as a promise to grant any property rights for the use of Metropolitan's property.

19.0 Compliance with Environmental Laws and Regulations

As a public agency, Metropolitan is required to comply with all applicable environmental laws and regulations related to the activities it carries out or approves. Consequently, project plans, maps, and other information must be reviewed to determine Metropolitan's obligations pursuant to state and federal environmental laws and regulations, including, but not limited to:

A. California Environmental Quality Act (CEQA) (Public Resources Code 21000-21177) and the State CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 1500-15387)

B. Federal Endangered Species Act (ESA) of 1973, 16 U.S.C. §§ 1531, et seq.

C. California Fish and Game Code Sections 2050-2069 (California ESA)

D. California Fish and Game Code Section 1602

E. California Fish and Game Code Sections 3511, 4700, 5050 and 5515 (California fully protected species)

F. Federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. §§ 703-712

G. Federal Clean Water Act (including but not limited to Sections 404 and 401) 33 U.S.C. §§ 1342, 1344)

H. Porter Cologne Water Quality Control Act of 1969, California Water Code §§ 13000-14076.

I. Title 22, California Code of Regulations, Chapter 16 (California Waterworks Standards), Section 64572 (Water Main Separation)

Metropolitan may require the project applicant to pay for any environmental review, compliance and/or mitigation costs incurred to satisfy such legal obligations.

20.0 Paramount Rights / Metropolitan's Rights within Existing Rights-of-Way

Facilities constructed within Metropolitan's rights-of-way shall be subject to the paramount right of Metropolitan to use its rights-of-way for the purpose for which they were acquired. If at any time Metropolitan or its assigns should, in the exercise of their rights, find it necessary to remove or relocate any facilities from its rights-of-way, such removal and replacement or relocation shall be at the expense of the owner of the facility.

21.0 Disclaimer and Information Accuracy

Metropolitan assumes no responsibility for the accuracy of the substructure information herein provided. The user assumes responsibility for verifying substructure locations before excavating and assumes all liability for damage to Metropolitan's facilities as a result of such excavation. Additionally, the user is cautioned to conduct surveys and other field investigations as you may deem prudent, to assure that your project plans are correct. The relevant representative from Metropolitan must be called at least two working days, before any work activity in proximity to Metropolitan's facilities.

It generally takes 30 days to review project plans and provide written responses. Metropolitan reserves the right to modify requirements based on case-specific issues and regulatory developments.

Table 1: General Guidelines for Pipeline Separation between Metropolitan's Pipeline[1] and Sanitary Sewer[2] or Hazardous Fluid Pipeline[3]

Pipeline Crossings	Metropolitan requires that sanitary sewer and hazardous fluid pipelines that cross Metropolitan's pipelines have special pipe construction (no joints) **and** secondary containment[4]. This is required for the full width of Metropolitan's rights-of-way or within 10 feet tangent to the outer edges of Metropolitan's pipeline within public streets. Additionally, sanitary sewer and hazardous fluid pipelines crossing Metropolitan's pipelines must be perpendicular and maintain a minimum 1-foot vertical clearance between the top and the bottom of Metropolitan's pipeline and the pipe casing. These requirements apply to all sanitary sewer crossings regardless if the sanitary sewer main is located below or above Metropolitan's pipeline.
Parallel Pipeline	Metropolitan generally does not permit the installation of longitudinal pipelines along its rights-of-way. Within public streets, Metropolitan requires that all parallel sanitary sewer, hazardous fluid pipelines and/or non-potable utilities be located a minimum of 10 feet from the outside edges of Metropolitan's pipelines. When 10-foot horizontal separation criteria cannot be met, longitudinal pipelines require special pipe construction (no joints) **and** secondary containment[4].
Sewer Manhole	Sanitary sewer manholes are not allowed within Metropolitan's rights-of-way. Within public streets, Metropolitan requests manholes parallel to its pipeline be located a minimum of 10 feet from the outside edges of its pipelines. When 10 foot horizontal separation criteria cannot be met, the structure must have secondary containment[5].

Notes:

[1] Separation distances are measured from the outer edges of each pipe.

[2] Sanitary sewer requirements apply to all recycled water treated to less than disinfected tertiary recycled water (disinfected secondary recycled water or less). Recycled water definitions are included in Title 22, California Code of Regulations, Chapter 3 (Water Recycling Criteria), Section 60301.

[3] Hazardous fluids include e.g., oil, fuels, chemicals, industrial wastes, wastewater sludge, etc.

[4] Secondary Containment for Pipeline - Secondary containment consists of a continuous pipeline sleeve (no joints). Examples acceptable to Metropolitan include welded steel pipe with grout in annular space and cathodic protection (unless coated with non-conductive material) and High Density Polyethylene (HDPE) pipe with fusion-welded joints.

[5] Secondary Containment for Structures – Secondary containment consists of external HDPE liner or other approved method.

Table 2: General Guidelines for Pipeline Separation between Metropolitan's Pipeline[1] and Storm Drain and/or Disinfected Tertiary Recycled Water[2]

Pipeline Crossings	Metropolitan requires crossing pipelines to be special pipe construction (no joints) or have secondary containment[3] within 10-feet tangent to the outer edges of Metropolitan's pipeline. Additionally, pipelines crossing Metropolitan's pipelines must be perpendicular and maintain a minimum 1-foot vertical clearance.
Parallel Pipeline	Metropolitan generally does not permit the installation of longitudinal pipelines along its rights-of-way. Within public streets, Metropolitan requests that all parallel pipelines be located a minimum of 10 feet from the outside edges of Metropolitan's pipelines. When 10-foot horizontal separation criteria cannot be met, special pipe construction (no joints) or secondary containment[3] are required.
Storm Drain Manhole	Permanent utility structures (e.g., manhole. catch basin, inlets) are not allowed within Metropolitan's rights-of-way. Within public streets, Metropolitan requests all structures parallel to its pipeline be located a minimum of 10 feet from the outside edges of its pipelines. When 10 foot horizontal separation criteria cannot be met, the structure must have secondary containment[4].

Notes:

[1] *Separation distances are measured from the outer edges of each pipe.*

[2] *Disinfected tertiary recycled water as defined* in Title 22, California Code of Regulations, Chapter 3 (*Water Recycling Criteria*), Section 60301.

[3] *Secondary Containment for Pipeline - Secondary containment consists of a continuous pipeline sleeve (no joints). Examples acceptable to Metropolitan include welded steel pipe with grout in annular space and cathodic protection (unless coated with non-conductive material) and High Density Polyethylene (HDPE) pipe with fusion-welded joints.*

[4] *Secondary Containment for Structures – Secondary containment consists of external HDPE liner or other approved method.*

Table 3: General Guidelines for Pipeline Separation[1] between Metropolitan's Pipeline and Recycled Water[2,4] Irrigations

Pressurized recycled irrigation mainlines	• Crossings - must be perpendicular and maintain a minimum 1-foot vertical clearance. Crossing pressurized recycled irrigation mainlines must be special pipe construction (no joints) or have secondary containment[3] within 10-feet tangent to the outer edges of Metropolitan's pipeline. • Longitudinal - must maintain a minimum 10-foot horizontal separation and route along the perimeter of Metropolitan's rights-of-way where possible.
Intermittently Energized Recycled Water Irrigation System Components	• Crossings - must be perpendicular and maintain a minimum 1-foot vertical clearance. Crossing irrigation laterals within 5-feet tangent to the outer edges of Metropolitan's pipeline must be special pipe construction (no joints) or have secondary containment[3]. • Longitudinal – must maintain a minimum 5-foot horizontal separation between all intermittently energized recycled water irrigation system components (e.g. irrigation lateral lines, control valves, rotors) and the outer edges of Metropolitan's pipeline. Longitudinal irrigation laterals within 5-feet tangent to the outer edges of Metropolitan's pipeline must be special pipe construction (no joints) or have secondary containment[3].
Irrigation Structures	Irrigation structures such as meters, pumps, control valves, etc. must be located outside of Metropolitan's rights-of-way.
Irrigation spray rotors near Metropolitan's aboveground facilities	Irrigation spray rotors must be located a minimum of 20-foot from any Metropolitan above ground structures with the spray direction away from these structures. These rotors should be routinely maintained and adjusted as necessary to ensure no over-spray into 20-foot clear zones.
Irrigations near open canals and aqueducts	Irrigation with recycled water near open canals and aqueducts will require a setback distance to be determined based on site-specific conditions. Runoff of recycled water must be contained within an approved use area and not impact Metropolitan facilities. Appropriate setbacks must also be in place to prevent overspray of recycled water impacting Metropolitan's facilities.

Notes:

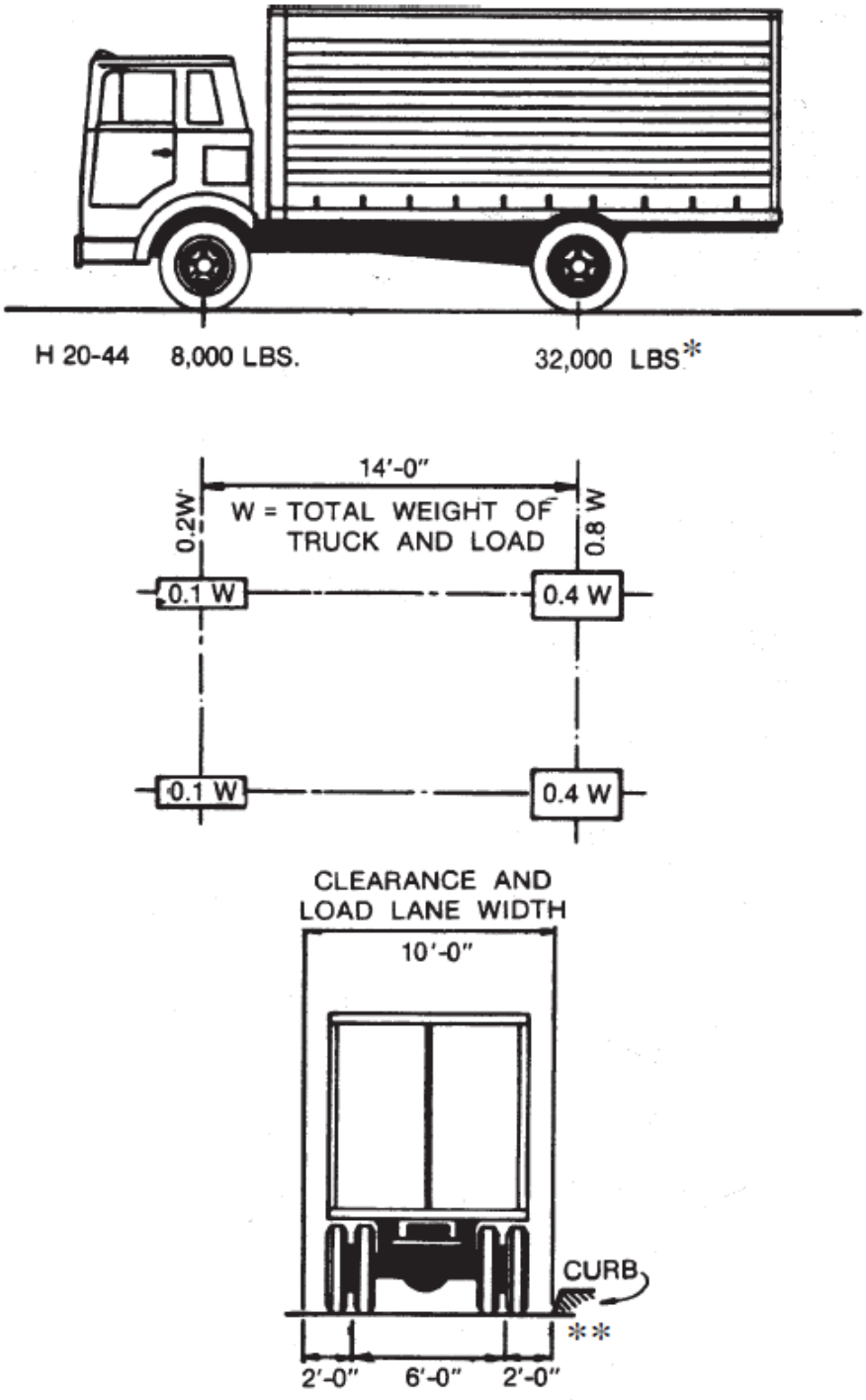
[1] *Separation distances are measured from the outer edges of each pipe.*

[2] *Requirements for recycled water irrigation apply to all levels of treatment of recycled water for non-potable uses.* Recycled water definitions are included in Title 22, California Code of Regulations, Chapter 3 (*Water Recycling Criteria*), Section 60301.

[3] *Secondary Containment for Pipeline - Secondary containment consists of a continuous pipeline sleeve (no joints). Examples acceptable to Metropolitan include welded steel pipe with grout in annular space and cathodic protection (unless coated with non-conductive material) and High Density Polyethylene (HDPE) pipe with fusion-welded joints.*

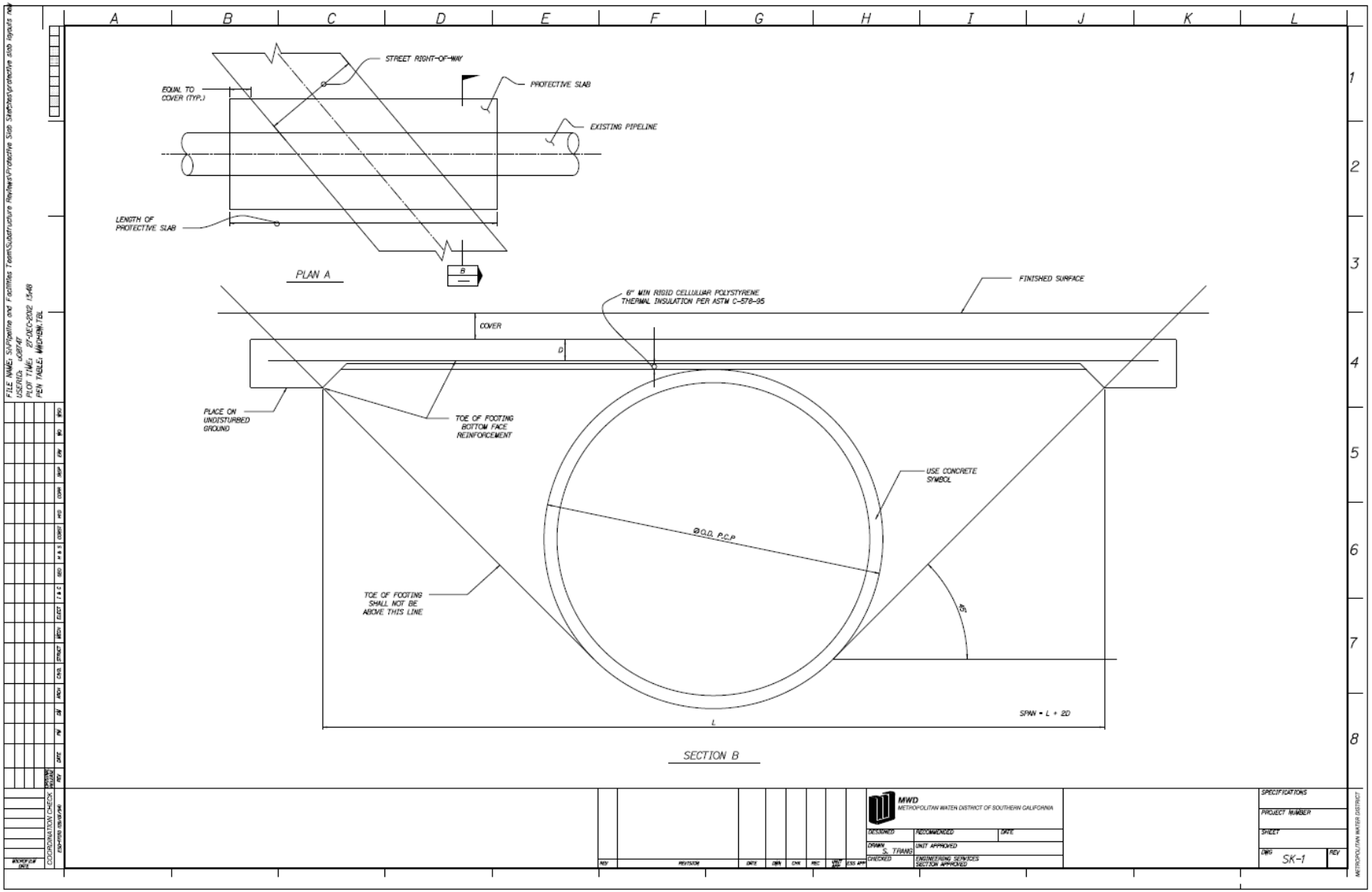
[4] *Irrigation with recycled water shall not be applied directly above Metropolitan's treated water pipelines.*

Figure 1: AASHTO H-20 Loading



Note: The H loadings consist of a two-axle truck or the corresponding lane loadings as illustrated above. The H loadings are designated "H" followed by a number indicating the gross weight in tons of the standard truck.

Figure 2: Drawing SK-1



From: Rami Asad <rasad@ci.upland.ca.us>
Sent: Tuesday, July 9, 2019 7:41 AM
To: Cecily Session-Goins
Subject: Sierra Ave and Casa Grande Warehouse

CAUTION - EXTERNAL SENDER - THIS EMAIL ORIGINATED OUTSIDE OF THE CITY'S EMAIL SYSTEM
Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Ms. Cecily Session-Goins,

This email is in response to the letter sent by your office in regards to the Sierra Ave and Casa Grande Warehouse project.

I live in the Las Colinas community and I'm a business owner in Fontana. I do NOT want a warehouse next to residential homes. This property is zoned residential and we would like to keep it that way. We don't want trucks, warehouse, traffic in our neighborhood where our kids are playing.

Thank you for your time.

Rami Asad
909-562-2640

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA USPS AND E-MAIL: July 23, 2019

CSGoins@fontana.org
Cecily Session-Goins, Assistant Planner
City of Fontana, Planning Division
8353 Sierra Avenue
Fontana, CA 92335

Notice of Preparation of a Draft Environmental Impact Report for the Proposed Sierra Avenue and Casa Grande Avenue Warehouse Project[1]

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. South Coast AQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send South Coast AQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to South Coast AQMD. Please forward a copy of the Draft EIR directly to South Coast AQMD at the address shown in the letterhead. **In addition, please send with the Draft EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files[2]. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, South Coast AQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

South Coast AQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. South Coast AQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from South Coast AQMD's Subscription Services Department by calling (909) 396-3720. More guidance developed since this Handbook is also available on South Coast AQMD's website at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). South Coast AQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

[1] The Proposed Project would include construction of a 317,820-square-foot warehouse on 16.76 acres.

[2] Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.

South Coast AQMD has also developed both regional and localized significance thresholds. South Coast AQMD staff requests that the Lead Agency quantify criteria pollutant emissions and compare the results to South Coast AQMD's CEQA regional pollutant emissions significance thresholds to determine air quality impacts. South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, South Coast AQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the Proposed Project, it is recommended that the Lead Agency perform a localized analysis by either using the LSTs developed by South Coast AQMD staff or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.

Operation of the Proposed Project generates or attracts heavy-duty diesel-fueled vehicles. It is recommended that the Lead Agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, which can be found at: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Guidance[3] on strategies to reduce air pollution exposure near high-volume roadways can be found at: https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF.

South Coast AQMD staff is concerned about potential public health impacts of siting warehouses within close proximity of sensitive land uses, especially in communities that are already heavily affected by the existing warehouse and truck activities. The South Coast AQMD's Multiple Air Toxics Exposure Study

[3] In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's Air Quality and Land Use Handbook: A Community Health Perspective. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: https://www.arb.ca.gov/ch/landuse.htm.

(MATES IV), completed in May 2015, concluded that the largest contributor to cancer risk from air pollution is diesel particulate matter (DPM) emissions, and that the areas in San Bernardino County within the South Coast Air Basin have the second highest projected cancer risk of 339 in one million[4]. Operation of warehouses generates and attracts heavy-duty diesel-fueled trucks that emit DPM. When the health impacts from the Proposed Project are added to those existing impacts, residents living in the communities surrounding the Proposed Project will possibly face an even greater exposure to air pollution and bear a disproportionate burden of increasing health risks. Thus, cumulative impacts from warehouse projects in communities with existing industrial sources should be evaluated and disclosed.

Trip Rates for High Cube Warehouse Projects

The Proposed Project will include, among others, construction of a 317,820-square-foot warehouse on 16.76 acres. South Coast AQMD staff recommends the use of truck trip rates from the Institute of Transportation Engineers (ITE) for high cube warehouse projects located in South Coast AQMD (i.e. 1.68 average daily vehicle trips per 1,000 square feet and 0.64 average daily truck trips per 1,000 square feet). Consistent with CEQA Guidelines, the Draft EIR for the Proposed Project may use a non-default trip rate if there is substantial evidence supporting another rate is more appropriate for the air quality analysis.

Mitigation Measures

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize these impacts. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project, including:

- Chapter 11 "Mitigating the Impact of a Project" of South Coast AQMD'S *CEQA Air Quality Handbook.* South Coast AQMD's CEQA web pages available here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies
- South Coast AQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- South Coast AQMD's Mitigation Monitoring and Reporting Plan (MMRP) for the 2016 Air Quality Management Plan (2016 AQMP) available here (starting on page 86): http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf
- California Air Pollution Control Officers Association (CAPCOA)'s *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Additional mitigation measures for operational air quality impacts from mobile sources that the Lead Agency should consider in the Draft EIR may include the following:

- Require zero-emissions or near-zero emission on-road haul trucks such as heavy-duty trucks with natural gas engines that meet the CARB's adopted optional NOx emissions standard at 0.02 grams per brake horsepower-hour (g/bhp-hr), if and when feasible. At a minimum, require that vendors, contractors, and/or haul truck operators commit to using 2010 model year[5] trucks (e.g.,

[4] South Coast AQMD. May 2015. *Multiple Air Toxics Exposure Study in the South Coast Air Basin*. Accessed at: http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf.

[5] The CARB adopted the statewide Truck and Bus Regulation in 2010. The Regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter

material delivery trucks and soil import/export) that meet CARB's 2010 engine emissions standards at 0.01 g/bhp-hr of particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks[6]. Include environmental analyses to evaluate, identify, and provide sufficient power and infrastructure available for zero emission trucks and supportive infrastructures in the Energy and Utilities and Service Systems Sections in the CEQA document, where appropriate. The Lead Agency should include the requirement of zero-emission or near-zero emission heavy-duty trucks in applicable bid documents, purchase orders, and contracts. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards, and make the records available for inspection. The Lead Agency should conduct regular inspections to the maximum extent feasible to ensure compliance.

- Provide electric vehicle (EV) Charging Stations (see the discussion below regarding EV charging stations).
- Should the Proposed Project generate significant regional emissions, the Lead Agency should require mitigation that requires accelerated phase-in for non-diesel powered trucks. For example, natural gas trucks, including Class 8 HHD trucks, are commercially available today. Natural gas trucks can provide a substantial reduction in health risks, and may be more financially feasible today due to reduced fuel costs compared to diesel. In the Final CEQA document, the Lead Agency should require a phase-in schedule for these cleaner operating trucks to reduce any significant adverse air quality impacts. South Coast AQMD staff is available to discuss the availability of current and upcoming truck technologies and incentive programs with the Lead Agency.
- Trucks that can operate at least partially on electricity have the ability to substantially reduce the significant NOx impacts from this project. Further, trucks that run at least partially on electricity are projected to become available during the life of the project as discussed in the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS)[7]. It is important to make this electrical infrastructure available when the project is built so that it is ready when this technology becomes commercially available. The cost of installing electrical charging equipment onsite is significantly cheaper if completed when the project is built compared to retrofitting an existing building. Therefore, South Coast AQMD staff recommends the Lead Agency require the Proposed Project and other plan areas that allow truck parking to be constructed with the appropriate infrastructure to facilitate sufficient electric charging for trucks to plug-in. Similar to the City of Los Angeles requirements for all new projects, South Coast AQMD staff recommends that the Lead Agency require at least five percent of all vehicle parking spaces (including for trucks) include EV charging stations[8]. Further, electrical hookups should be provided at the onsite truck stop for truckers to plug in any onboard auxiliary equipment. At a minimum, electrical panels should be appropriately sized to allow for future expanded use.
- Have truck routes clearly marked with trailblazer signs, so that trucks will not enter residential areas.

---

requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. More information on the CARB's Truck and Bus Regulation is available at: https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.

[6] Based on a review of the California Air Resources Board's diesel truck regulations, 2010 model year diesel haul trucks should have already been available and can be obtained in a successful manner for the project construction California Air Resources Board. March 2016. Available at: http://www.truckload.org/tca/files/ccLibraryFiles/Filename/000000003422/California-Clean-Truck-and-Trailer-Update.pdf (See slide #23).

[7] Southern California Association of Governments. Accessed at: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

[8] City of Los Angeles. Accessed at: http://ladbs.org/LADBSWeb/LADBS_Forms/Publications/LAGreenBuildingCodeOrdinance.pdf.

- Limit the daily number of trucks allowed at the Proposed Project to levels analyzed in the Final CEQA document. If higher daily truck volumes are anticipated to visit the site, the Lead Agency should commit to re-evaluating the Proposed Project through CEQA prior to allowing this land use or higher activity level.
- Design the Proposed Project such that entrances and exits are such that trucks are not traversing past neighbors or other sensitive receptors.
- Design the Proposed Project such that any check-in point for trucks is well inside the Proposed Project site to ensure that there are no trucks queuing outside of the facility.
- Design the Proposed Project to ensure that truck traffic within the Proposed Project site is located away from the property line(s) closest to its residential or sensitive receptor neighbors.
- Restrict overnight parking in residential areas.
- Establish overnight parking within the Proposed Project where trucks can rest overnight.
- Establish area(s) within the Proposed Project site for repair needs.
- Develop, adopt and enforce truck routes both in and out of city, and in and out of facilities.
- Create a buffer zone of at least 300 meters (roughly 1,000 feet), which can be office space, employee parking, greenbelt, etc. between the Proposed Project and sensitive receptors.

Additional mitigation measures for operational air quality impacts from other area sources that the Lead Agency should consider in the Draft EIR may include the following:

- Maximize use of solar energy including solar panels.
- Install the maximum possible number of solar energy arrays on the building roofs and/or on the project site to generate solar energy for the facility and/or EV charging stations.
- Maximize the planting of trees in landscaping and parking lots.
- Use light colored paving and roofing materials.
- Utilize only Energy Star heating, cooling, and lighting devices, and appliances.
- Require use of electric or alternatively fueled sweepers with HEPA filters.
- Use of water-based or low VOC cleaning products that go beyond the requirements of South Coast AQMD Rule 1113.

Alternative

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires the consideration and discussion of alternatives to the project or its location which are capable of avoiding or substantially lessening any of the significant effects of the project. The discussion of a reasonable range of potentially feasible alternatives, including a "no project" alternative, is intended to foster informed decision-making and public participation. Pursuant to CEQA Guidelines Section 15126.6(d), the Draft EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project.

Permits and South Coast AQMD Rules

In the event that implementation of the Proposed Project requires a permit from South Coast AQMD, South Coast AQMD should be identified as a Responsible Agency for the Proposed Project. The assumptions in the air quality analysis in the certified Final EIR will be the basis for permit conditions and limits. For more information on permits, please visit South Coast AQMD's webpage at: http://www.aqmd.gov/home/permits. Questions on permits can be directed to South Coast AQMD's Engineering and Permitting staff at (909) 396-3385.

Data Sources

South Coast AQMD rules and relevant air quality reports and data are available by calling South Coast AQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available at South Coast AQMD's webpage at: http://www.aqmd.gov.

South Coast AQMD staff is available to work with the Lead Agency to ensure that project air quality and health risk impacts are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov or (909) 396-3308.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
SBC190702-13
Control Number

Board of Directors

Dr. Michael Taylor
President, Board of Directors
Kyle Crowther
Vice President, Board of Directors
Dr. Clifford O. Young, Sr.
Director
Greg Young
Director
Donald Olinger
Director
Crystal L. Escalera
Board Secretary

West Valley Water District

Established as a public agency in 1952

West Valley Water District's mission is to provide a reliable, safe-drinking water supply to meet our customers' present and future needs at a reasonable cost and to promote water-use efficiency and conservation.

Administrative Staff

Clarence C. Mansell, Jr.
General Manager
Ricardo Pacheco
Assistant General Manager
Logan Olds
Assistant General Manager
Jeremiah Brosowske
Assistant General Manager
Deborah L. Martinez
Human Resources and Risk Manager

July 23, 2019

Cecily Session-Goins
Assistant Planner
City of Fontana
8353 Sierra Ave
Fontana, CA 92335

Subject: Response to NOP to Draft EIR - Casa Grande Dr and Sierra Ave

Dear Ms. Session-Goins,

Thank you for the opportunity to review the subject project. We offer the following comments on behalf of the West Valley Water District (WVWD):

1. The Development is within WVWD service area and does not have any active water services currently serving any of the parcels. The applicant will be required to apply for and submit a plan check for the installation of all new water services associated with the development of these parcels.

2. The project will be required to perform a hydraulic analysis in order to determine if the existing facilities on Casa Grande Dr and Sierra Ave are sufficient for the proposed development. The cost of the analysis shall be paid by the developer and coordinated through the District.

3. All water improvements proposed for installation must be installed by one of the District's preapproved contractors. All development fees and deposits must be paid prior to construction of any off-site water facilities.

4. All plan check requirements, applications and the schedule of fees can be found on the District's Engineering web page.

Should you or the applicant have any questions, please do not hesitate to contact me at (909) 875-1804 ext 373.

Sincerely,

WEST VALLEY WATER DISTRICT

Daniel Guerra
Engineering Development Coordinator

855 W. Base Line Rd., P.O. Box 920 | Rialto, CA 92377-0920
Ph: (909) 875-1804 | Fax: (909) 875-1849
www.wvwd.org

FAX (909) 875-7284 Administration
FAX (909) 875-1361 Engineering
FAX (909) 875-1849 Customer Service

City of Fontana
AMENDED Notice of Preparation of Draft EIR
and Notice of Scoping Meeting

Date: February 24, 2020

To: Responsible and Trustee Agents/Interested Organizations and Individuals

Subject: **AMENDED Notice of Preparation (NOP) of a Draft Environmental Report and Notice of a Public Scoping Meeting**

Lead Agency:

CITY OF FONTANA
Planning Division
8353 Sierra Avenue
Fontana, CA 92335
909-350-6723
csgoins@fontana.org
Contact: Cecily Session-Goins,
Assistant Planner

Consulting Firm Preparing the Draft EIR

KIMLEY-HORN AND ASSOCIATES, INC.
3880 Lemon Street, Suite 420
Riverside, CA 92501
951-543-9869
Contact: Kari Cano

NOTE TO THE READER: The City of Fontana has amended this Notice of Preparation ("NOP") to reflect an expanded scope for the Sierra Avenue and Casa Grande Avenue Warehouse Project EIR, which will now also address residential unit replacement sites, pursuant to requirements of the Housing Crisis Act of 2019 (Senate Bill 330), as discussed further below in Section D. This Amended NOP includes an updated project description and a list of the environmental issues to be examined in the Environmental Impact Report (EIR). All other aspects of the project as identified in the previously circulated Notice of Preparation (circulated from July 7, 2019 through August 5, 2019) remain the same.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but no later than 30 days after receipt of this notice.

Please send your response to Cecily Session-Goins, Assistant Planner, at the City of Fontana address shown above. Please include the name, phone number, and address of a contact person in your response.

Project Title: **Sierra Avenue and Casa Grande Avenue Warehouse Project EIR**

Location: The proposed Project is located in the northeastern portion of the City of Fontana (City); approximately 330 feet west of the City border as shown in **Exhibit 1: Regional Vicinity.** The proposed Project site consists of three connected parcels on the northeast corner of the Sierra Avenue and Casa Grande Drive intersection; refer to **Exhibit 2: Local Vicinity**. Regional access would be available to the proposed Project via transportation routes, State Route 210 and Interstate Highway I-15. The State Route 210 entrance and exit is located approximately 1.5 miles south of the proposed Project via Sierra Avenue. The Interstate Highway I-15 entrance and exit is located approximately 1.6 miles north of the proposed Project via Sierra Avenue.

Additionally, the Project includes two additional residential replacement sites, 5.69 acres located north of Malaga Street and west of Mango Street, and 3.58 acres located east of Palmetto Avenue and south of Arrow Boulevard. Regional access would be available to these Project sites via State Route 210. The State Route 210 entrance and exit is located approximately 2.5 and 3.0 miles north of the proposed Project sites via Sierra Avenue.

Description

A. Project Setting

The proposed Project will be constructed within three parcels in the northeast portion of the City (Assessor Parcel Numbers (APN's) 0239-151-22, 0239-151-34, and 0239-151-40) totaling approximately 16.76 acres. These three parcels are currently undeveloped and vacant with patches of brush scattered over their rocky soil. Undeveloped, vacant parcels border the proposed Project to the North and East, with undeveloped parcels bordering the proposed Project site across Casa Grande Drive to the South and across Sierra Avenue to the West.

Two of the parcels included in the proposed Project (APNs: 0239-151-34 and 0239-151-40) have a General Plan Land Use (GPLU) designation of Medium-Density Residential (R-M). Those two parcels also have a zoning designation of Medium-Density Residential (R-2). The other included parcel (APN: 0239-151-22) has a GPLU designation of Multi-Family High Residential (R-MFH) and a Zoning land use designation of Multi-Family High Density Residential Zone (R-5). The parcels along the northern border of the proposed Project have GPLU designations of R-MFH and Zoning Code designations of R-5. The parcels along the southern border of the proposed Project have Light Industrial (I-L) GPLU designation and Light Industrial (M-1) Zoning land use designations. The parcels along the eastern border of the proposed Project are designated as Public Utility Corridor (P-UC) in the GP and designated as Public Utility Corridor (P-UC) in the Zoning Code. The parcels across Sierra Avenue, on the western border of the proposed Project have a Residential Planned Community (R-PC) GPLU designation and are located in the Arboretum Specific Plan.

B. General Plan Amendment and Change of Zone

The proposed Project consists of applications for a General Plan Amendment (GPA No. 18-006), a Zone Change (ZCA No. 18-006), and a Zoning Text Amendment (ZCA No. 18-007). The General Plan Amendment proposes the conversion of one parcel (APN: 0239-151-22) from Multi-Family High Density Residential Zone (R-MFH) to Light Industrial (I-L) and two parcels (APNs: 0239-151-34 and -40) from Medium-Density Residential to Light Industrial (I-L) . It is proposed that all three parcels be rezoned to Light Industrial (M-1).

C. Warehouse Development

The proposed Project also involves the development of an approximately 317,820 square foot warehouse at the northeast corner of Sierra Avenue and Casa Grande Drive. The warehouse will be built within the three (3) parcels identified in the General Plan Amendment and Change of Zone description. Landscape improvements and parking improvements along with trailer stalls are also included in the warehouse development; refer to **Exhibit 3, Site Plan**.

D. Residential Unit Replacement Sites

Two of the parcels proposed for warehouse development (APNs: 0239-151-34 and 0239-151-40) have a General Plan Land Use (GPLU) designation of Medium-Density Residential (R-M). Those two included parcels also have zoning designations of Medium-Density Residential (R-2). The other included parcel (APN: 0239-151-22) has a GPLU designation of Multi-Family High Residential (R-MFH) and a Zoning Code designation of Multi-Family High-Density Residential Zone (R-5 Consistent with the requirements of the Housing Crisis Act of 2019 (Senate Bill 330), the City is required to find "replacement site(s)" for any housing that would have been constructed and will not be built due to the General Plan Land Use Designation/Zone Change from residential to industrial to allow for the warehouse project. Due to the change of zoning for the warehouse project, it is anticipated that up to 219 residential units would be lost.

The City has identified two replacement sites, 5.69 acres located north of Malaga Street and west of Mango Street (Malaga Site), and 3.58 acres located east of Palmetto Avenue and south of Arrow Boulevard (Palmetto Site) for potential residential unit replacement sites. Both of these replacement sites currently have a GPLU of Single-Family Residential (R-SF) and zoning designations of Single-Family Residential (R-1). As part of this project, the Malaga Site's GPLU designation would be changed to Walkable Mixed-Use I (WMXU-1) and it would be upzoned to Form-Based Code (FBC) – Transitional District. The Palmetto Site's GPLU designation would be changed to Medium-Density Residential (R-M) and it would be upzoned to Medium-Density Residential (R-2). The increase in potential density for the "replacement sites" will off set the potential lost construction of the 219 residential units. The EIR for the Sierra Avenue and Casa Grande Drive Warehouse project will evaluate the environmental impacts of the future development of these sites for residential uses at a programmatic level, as no site specific applications have been submitted to the City at this time. Refer to **Exhibit 4: Replacement Sites.**

Environmental Issues to be Evaluated in the EIR

The City of Fontana, the lead agency for the proposed Sierra Avenue and Casa Grande Drive Warehouse Project, is subject to specific environmental review under CEQA. CEQA Guidelines §15063 provide that if a lead agency determines that an EIR will clearly be required for a project, an Initial Study is not required. In this case, the City has already determined that an EIR will need to be prepared based on the Project's potential to create short-term, long-term and cumulative impacts associated the proposed Project. Therefore, an EIR will be prepared to fully evaluate the potential impacts of the proposed Project. The EIR will evaluate all identified issues from the 2019 CEQA Initial Study Checklist.

The following issues are anticipated to be addressed in the EIR for both the warehouse project and the associated replacement sites:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire Hazards

The EIR will address the short- and long-term effects of the Project on the environment, including the impacts of any off-site improvements. It will also evaluate the potential for the Project to cause direct and indirect growth-inducing impacts, as well as cumulative impacts. Alternatives to the proposed Project will be evaluated that may reduce impacts that are determined to be significant in the EIR. Mitigation will be proposed for those impacts that are determined to be significant. A mitigation monitoring program will also be developed as required by §15097 of the CEQA Guidelines. The environmental determination in this Notice of Preparation is subject to a 30-day public review period per Public Resources §21080.4 and CEQA Guidelines §15082. Public agencies, interested organizations, and individuals have the opportunity to comment on the proposed Project, to identify those environmental issues, potentially affected by the Project which should be addressed further by the City of Fontana in the EIR.

Cortese List Notice: Pursuant to Public Resources Code 21092.6(a), the project sites are not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (California Department of Toxic Substances Control list of various hazardous sites).

The Environmental Documentation for the Project may be downloaded from the City's website:

www.fontana.org/planning

The Environmental Documentation is also available for review Monday through Thursday, between 8 AM and 6 PM at the following location:

City of Fontana
Community Development Department
8353 Sierra Avenue
Fontana, CA 92335

Public Scoping Meeting

The City will have a Scoping Meeting to:

1) Inform the public and interested agencies about the proposed Project; and
2) Solicit public comment on the scope of the environmental issues to be addressed in the EIR.

Date: March 18, 2020
Time: 5:30 PM

Location: City of Fontana Development Services Office Building
8353 Sierra Avenue
Fontana, CA 92335

Special Accommodations. Should you require special accommodations at the Public Scoping Meeting, such as for the hearing impaired or an English translator, please contact the City no later than March 18, 2020 (see contact information above).

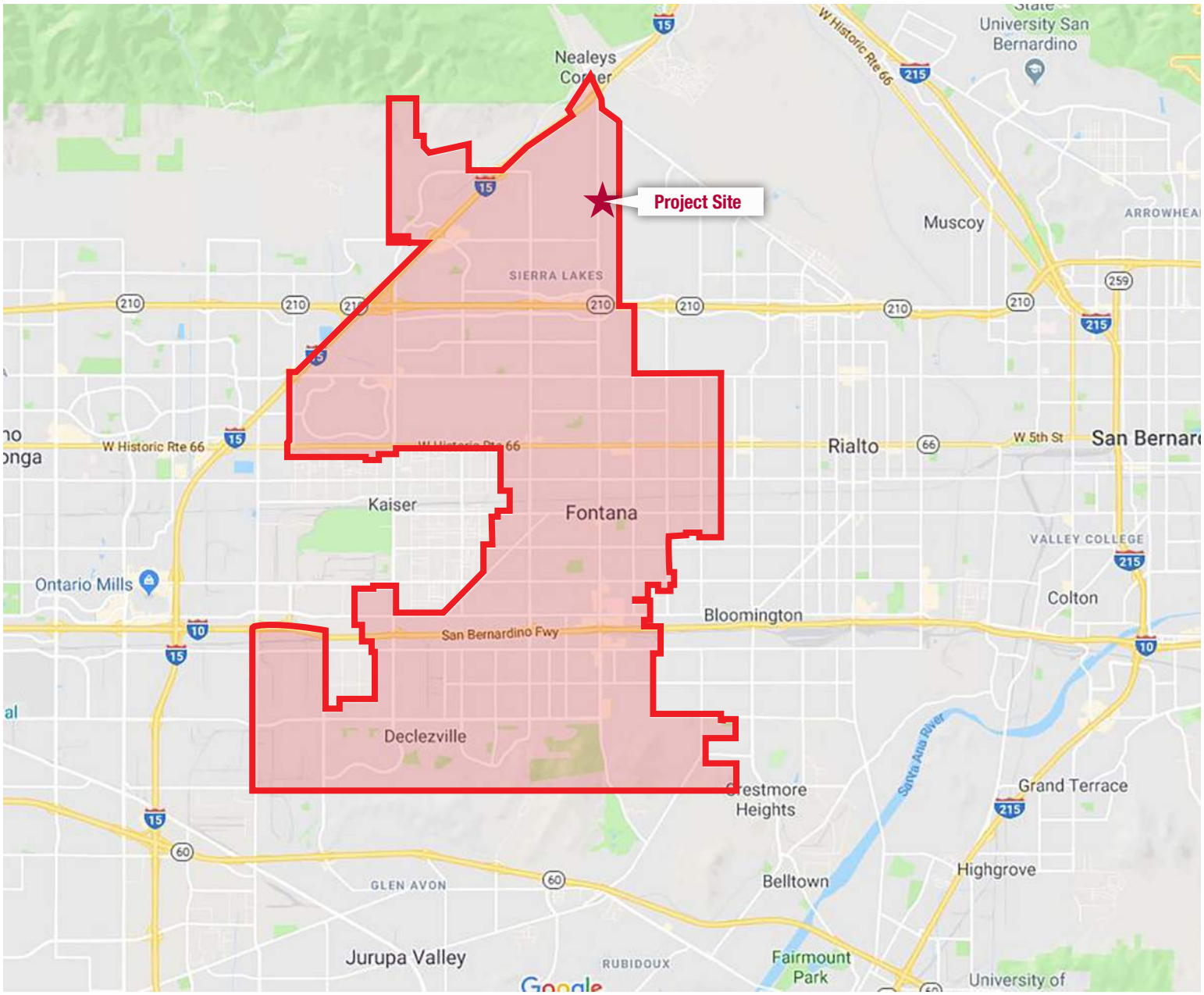


EXHIBIT 1: Regional Vicinity
Sierra Avenue/Casa Grande Drive Warehouse Project
City of Fontana

Kimley»Horn



EXHIBIT 2: Local Vicinity
Sierra Avenue/Casa Grande Avenue Warehouse Project
City of Fontana

Kimley»Horn

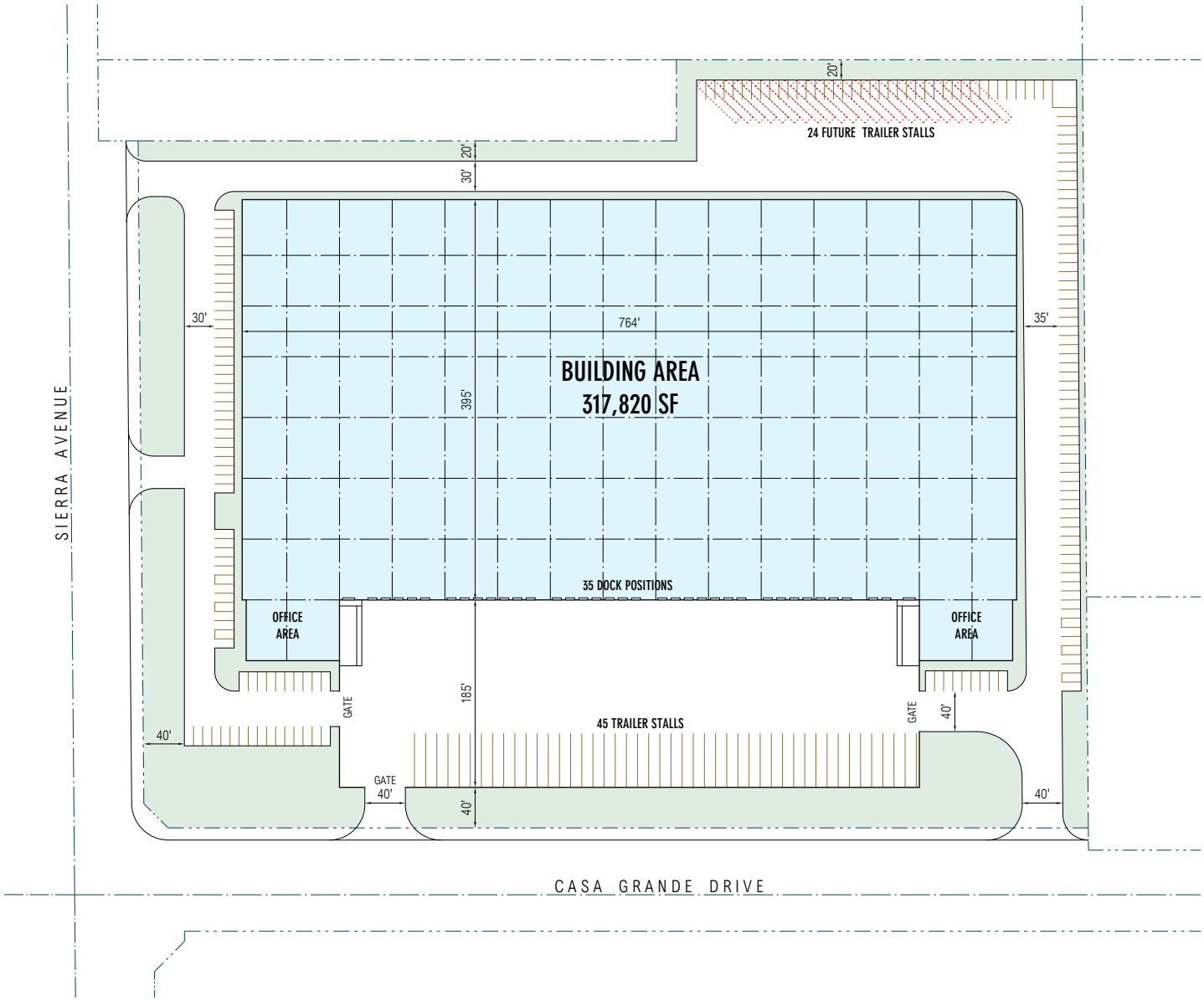


EXHIBIT 3: Site Plan

Sierra Avenue/Casa Grande Avenue Warehouse Project

City of Fontana

Kimley»Horn



EXHIBIT 4: Replacement Sites

Sierra Avenue/Casa Grande Drive Warehouse Project

City of Fontana

Kimley»Horn

From: abigail correa
To: Cecily Session-Goins
Subject: Re: warehouse project build located on sierra ave and casa grande fontana,ca
Date: Tuesday, March 3, 2020 3:47:53 PM

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due to me living in Rialto we the neighborhood of las colinas never recieved this notices ,but we are boardering where the ware house is planned on being built. this is not a fontana only issue.

On Tue, Mar 3, 2020, 3:44 PM Cecily Session-Goins <CSGoins@fontana.org> wrote:

> Hello Ms. Correa,
>
> Please reference the notice that was mailed out (it would be the same document that you found my email address). The meeting will be help on March 18, 2020 at 5:30 pm at the DSO building on the City Hall Campus (8353 Sierra Avenue, Fontana). If you have further questions, please feel free to let me know. Thank you.
>
> **Cecily Session-Goins**
> Assistant Planner • Community Development
> CSGoins@fontana.org • Office: (909) 350-6723
>
> **From:** abigail correa <correa.abigail5023@gmail.com>
> **Sent:** Tuesday, March 3, 2020 3:29 PM
> **To:** Cecily Session-Goins <CSGoins@fontana.org>
> **Subject:** Re: warehouse project build located on sierra ave and casa grande fontana,ca
>
> CAUTION - EXTERNAL SENDER - THIS EMAIL ORIGINATED OUTSIDE OF THE CITY'S EMAIL SYSTEM
> Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> i do not have any info of a meeting or where it will be held.
>
> On Tue, Mar 3, 2020, 3:21 PM Cecily Session-Goins <CSGoins@fontana.org> wrote:
>
> > Good afternoon Ms. Correa,
> >
> > Thank you for providing me with your comments on the Notice of Preparation/Scoping Meeting Notice for the proposed warehouse. Do you plan on attending the scoping meeting? If not, we could set up a time to talk (if you had other concerns that you would like to express).

Cecily Session-Goins
Assistant Planner • Community Development
City of Fontana • 8353 Sierra Ave • Fontana, CA 92335
CSGoins@fontana.org • Office: (909) 350-6723

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From: abigail correa <correa.abigail5023@gmail.com>
Sent: Thursday, February 27, 2020 9:51 PM
To: Cecily Session-Goins <CSGoins@fontana.org>
Subject: warehouse project build located on sierra ave and casa grande fontana,ca

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hi, my name is abigail correa, and I currently live in the boarding neighborhood los colinas. I would like to argue building another warehouse will cause more trouble to our neighborhood. we are already facing continuiois issues (racing,trash dumping,mailbox braking..etc) with the target warehouse that was built amongest our community. secondly, with this built all our properties values will drop even more which is unfair to those who live around the area. I am not the only one who is against this built near our community; please survey not only fontana residence on this matter but any community residing in the area.

From: April Heringtonij
To: Cecily Session-Goins
Subject: Re: Malaga site project
Date: Friday, March 20, 2020 9:29:56 AM

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Cecily, Thank you for responding so quickly.
Yes, I would love to speak with you for more clarity. We are under a stay at home order so other than possibly running to the grocery store today I will be available. I will add your office number to my address list. Any numbers that are not in my contact list go directly to my voicemail. If this happens please leave a quick message and I will call you right back. My cell number is 951-764-9526

Hoping you and your family are staying in good health

April Herington

Sent from my iPhone

> On Mar 17, 2020, at 5:04 PM, Cecily Session-Goins <CSGoins@fontana.org> wrote:
>
> Good afternoon Ms. Herington,
>
> Thank you for providing your letter as a comment on the Notice of Preparation. I want to assure you that the proposed change of zoning for your area (Malaga Site) that there will not be a taking of property or a new development proposed. The City of Fontana is requesting to change the zoning of the Malaga Site and the Palmetto Site just to increase the possibility for development in order to make up for a rezoning from residential to industrial near Sierra Avenue and Casa Grande Avenue. The requested zoning for both replacement sites will allow property owners to maintain their current use on the site (like your single-family home) while on paper showing that the property has the potential for more.
>
> I know this can be confusing so I would love to speak with you about this. Would you mind giving me a call tomorrow or sending me your phone number with a good time to call you? Thanks so much!

Cecily Session-Goins
Assistant Planner • Community

Development
City of Fontana • 8353 Sierra Ave • Fontana, CA 92335
CSGoins@fontana.org • Office: (909) 350-6723

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From: April Heringtonij <a.herington@icloud.com>
Sent: Tuesday, March 17, 2020 11:37 AM
To: Cecily Session-Goins <CSGoins@fontana.org>
Cc: April <a.notary@sbcglobal.net>
Subject: Malaga site project

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Sent from my iPhone

Public Comment – NOP/Scoping Meeting Notice

February 26, 2020
Brenda Avilo
(626) 325-4576
Neighboring Malaga Site

- Wanted to know if there is anything that she needed to do for this.
- Did not appear to have a problem with the rezoning since it did not impact her property and did not involve building a warehouse.

February 27, 2020
Abigail Correa
Correa.abigail5023@gmail.com
Las Colinas Resident

"hi, my name is abigail correa, and I currently live in the boarding neighborhood los colinas. I would like to argue building another warehouse will cause more trouble to our neighborhood. we are already facing continuiois issues (racing,trash dumping,mailbox braking..etc) with the target warehouse that was built amongest our community. secondly, with this built all our properties values will drop even more which is unfair to those who live around the area. I am not the only one who is against this built near our community; please survey not only fontana residence on this matter but any community residing in the area."

- Further emails revealed that she was not aware of the scoping meeting date and did not have a copy of the notice. It appeared that she received my contact information from a neighbor.

March 2, 2020
Celia Maldonado (?)
Owner of 17070 Malaga Avenue

- Wanted more information about the proposed zone change on behalf of her neighbors, who thought that their homes would be demolished.
- She seemed satisfied with the proposed zone change but will contact me if she has more questions.

March 3, 2020
Winnie Chang
(626) 318-2666
Owner of 7808 Mango Avenue

- Ms. Chang was pleased with the flexibility that the new zoning would provide since her property is large, but she has historically been restricted to a single-family home on the site.

- She stated that she would keep following the project and would begin working with an architect if the zone change and GPA are approved in the fall.

March 3, 2020
Jeffery Griffith
(909) 822-8295
Owner of 8620 Palmetto Avenue (Neighboring Palmetto Site)

- Mr. Griffith is concerned about the potential development on the site. He was convinced that there is a site plan being proposed.
- He came to understand that there is not specific development being proposed. He is open to the rezoning but wants more information.

March 4, 2020
Alexander
Neighboring Palmetto Site

- Alexander was concerned with impacts on the environment but was happy to know that an actual project was not being proposed at this time.

March 4, 2020
Sara Montana
(909) 969-3323
Neighboring Malaga Site (on Mango)

- Sarah is concerned about the impact of multi-family development on an area that is already congested and short on parking.
- She is also worried about safety for children walking to school.
- She was relieved to know that specific development is not being proposed at this time but feels like it will only be a matter of time.

March 9, 2020
Jimmy Barela
Financesbyjimmy.com

“This is my second email to stress that the warehouses this close to residence is a nuisance. I’m sure the new homes buying built would live to know that warehouses will be right next to their homes and the late night noise we hear from the Target distribution center is loud at night. These new proposed warehouses will amplify even more noise. I vote to KEEP IT RESIDENTIAL! FONTANA has plenty of other areas that are zoned for commercial/ warehouse. There needs to be balance. Would you like a warehouse next door to tour home? Ask yourself.”

March 15, 2020
Rami Asad
Rmmi2002@yahoo.com

909-562-2640

“My name is Rami Asad and I’m a Rialto resident but a Fontana property owner. I received a letter for a warehouse on Sierra and casa grande. I would like to ask the City to please DENY the development as this property is zoned for multi family residential NOT warehouse use. This warehouse will be too close to our homes and schools. This warehouse doesn’t belong in the area as it will have homes west, East and north of it.

The City has a zoning ordinance for this reason to keep warehouses in the proper location.

Again I would like to as you to please help us stop this warehouse from developing in between our homes.”

March 16, 2020
David Hubbard
Hubbard Law Firm
hubbardlawfirm@gmail.com
(951) 686-2660

- Sent letter on behalf of Robert Constant.

March 16, 2020
Nikos Constant
nkscnstnt@gmail.com
(213) 215-5960

- Wanted to know if the scoping meeting was still taking place.
- I invited comments via email prior to the end of the NOP period.

March 17, 2020
Maria Solano
(909) 684-0220

- Called on behalf of her mother, who owns a parcel in the Malaga Site.
- Ms. Solano wanted to know if the scoping meeting will take place considering the COVID 19 situation.

March 17, 2020
Eric Hernandez
(909) 239-4508

- Wanted to know if the scoping meeting will take place considering the COVID 19 situation.

From: David Hubbard
To: Cecily Session-Goins
Subject: Fwd: Robert Constant Letter re: Amended Notice of Preparation
Date: Monday, March 16, 2020 2:54:13 PM
Attachments: Constant 3-12-20 to Fontana.PDF

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Dear Ms. Sessions-Goins:

Please read the attached correspondence, issued on behalf of Robert N. Constant, in response to Fontana's February 24, 2020, letter titled "City of Fontana Amended Notice of Preparation." I had intended to send it to you Friday, but I sent it to the wrong email address.

Sincerely,

David F. Hubbard

--
HUBBARD LAW FIRM
3890 11th Street, #214
Riverside, CA 92501
(951) 686-2660

---------- *HUBBARD LAW FIRM* ----------

3890 Eleventh Street, Suite 214
Riverside, California 92501

HubbardLawFirm@gmail.com
Telephone: (951) 686-2660

March 12, 2020

Cecily Sessions-Goins
Assistant Planner, City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

VIA EMAIL

Re: City of Fontana 2-24-2020 Letter titled "City of Fontana letter Amended Notice of Preparation"

Dear Ms. Session-Goins:

The Amended Notice of Preparation referenced above requested that affected property owners submit responses regarding the proposed new warehouse. Below are comments made on behalf of property owner Robert N. Constant (Constant).

Fontana's rush to approve another massive warehouse on Sierra and Casa Grande Avenues is so harmful to its residents, many property owners and local business owners, that it should be halted as soon as possible. In addition, Fontana's rush to rezone the subject property and the "Residential Unit Replacement Sites"should be abandoned. As a decades-long Fontana property owner, Constant will vigorously oppose this warehouse project from going forward.

The Constants have been owners of their North Sierra Avenue property for almost 60 years. At that time the area was totally undeveloped, but they were confident that the area would develop and would be a source of income during their retirement years. The time has come for them to develop their property and they do not want to lose its value because of the area becoming highly industrialized with warehouses or other similar uses.

Back in 2013, Fontana approved the first warehouse to be built near the Constant's property. Constant, as a part owner, objected to that project because of its negative impacts. That project's EIR stated clearly that the pollution impact would be "significant" with "...no mitigation measures . . . that would reduce these emissions to levels that are less-than-significant ..."

The second warehouse near the first one added more pollution. Then a third warehouse was added to the collection. And now a fourth warehouse is proposed. As more warehouses are built the situation becomes even worse. Not only are the existing negative impacts becoming worse, additional problems arise. For example, because of the increasing number of trucks, new roads and existing roads away from the warehouse need to be widened. Has Fontana considered such future needs? New safety and several other issues are also problems. Constant recommends that Fontana's Planning and Building and Safety Departments study and document the impacts of both existing and future warehouses, along with future needs.

Fontana does not need another warehouse Environmental Impact Report (EIR). It has received several such reports on previously approved projects and all of these EIRs have stated that these projects have "significant and unavoidable impacts" which cause major impacts on peoples' health, and contribute to the degradation of citizens' quality of life. The mitigation methods that have been implemented have been ineffective. Fontana is famous for it unhealthy environment. Yet in spite of all of these problems, the City has continued to approve the construction of these undesirable projects. The residual cumulative undesirable impacts have become unbearable and unacceptable. Many people are infuriated. It is time for Fontana to reconsider its unwise and harmful decisions and give the public answers using the seven years of data accumulated since 2013.

Constant has noticed that some Fontana employees have closely coordinated with the developers of the project to be developed. Those employees have made certain backroom agreements with the developer, prior to the final approval of the project, so that by the time the project gets to the final approval stage, the project, in effect, has been approved and is difficult to change. This has to stop. Serious, meaningful coordination with all residents and stakeholders should start before the project has been approved.

Backroom decisions should not be made prior to formal approval of a project. Those persons making unauthorized agreements are not neutral and should not be the same persons who thoroughly review and approve the project. Fontana ought to investigate, document and publicize whether the previously approved warehouses have met the objectives, such as benefits, claimed in the EIRs. The results of this investigation will be useful for the decision makers of this and future projects.

The proposed warehouse would require 16.76 acres. Some 91% of this parcel would be covered by the building, paved driveways and paved parking lots. Less than 9% would be used for landscaping. It does not require a genius to conclude that such a project would have major adverse impacts on aesthetics, air pollution, quality of life, biological resources. hydrology, noise and traffic congestion. The project would cause citizens stress/annoyance/delays/health problems; it would reduce safety, produce light pollution, reduce property values, reduce shopping convenience, reduce quality of life, create neighborhoods that are not walkable, which studies show leads to pedestrian harm or even death. This project would cause desirable people and businesses to move out or in. It would destroy Fontana's reputation as a desirable city to live or do business. It would greatly reduce the value of commercial and residential properties and established businesses. Many other negative impacts can be added to the list. Each of the negative impacts has to be examined thoroughly prior to approval. The list of the problems cited above is the basis of my current objections to this project. Constant will try to attend all meetings planned for this project, speak at the public meetings and submit more detailed written comments.

This project does not satisfy the intent of the recently enacted CA Housing Crisis Act of 2019, which requires the building of more housing. This warehouse project eliminates residential zoning uses and replaces it with an industrial use. The solution proposed is to replace the lost residential sites with what is called euphemistically "Residential Unit Replacement Sites" (RURS). This is no solution at all; it eliminates residential building sites and it does not create any new sites. An example

of a satisfactory and valid solution is to take an existing warehouse (or other industrial zoned area), demolish its structure and rezone the property for residential uses. The RURS create a false equivalency since effects are now expanding from one area of Fontana to all areas of Fontana.

The existing project proposes two disconnected areas for the RURS. This solution creates new problems: If citizens object, two additional EIRs would be required with the potential time delays and legal expenses. Constant happens to own property next to and near the proposed Residential Unit Replacement Sites. Constant and the neighbors do not want the existing zoning to change into higher density because they believe the value of their neighboring properties will decrease. Therefore, Constant will voice objections to any zoning changes. You're destroying well-established neighborhoods to enrich a developer with the false equivalency of RURS.

Most replacement properties are now in well-established comfortable single family homes with large lots. Property owners and residents are happy with the existing situation, and do not wish their properties to be rezoned to a higher density designation, with its attendant harmful impacts on their neighborhood. Any changes should be put up to public vote.

Preparing the EIRs is expensive for both the developer and Fontana – a time-consuming activity that potentially causes great time delays in starting any project. It is not clear in the NOP as to who pays for these EIRs. Our suggestion is that this project not be approved until all concerns and issues are resolved.

This project is too important for the future of Fontana and its approval should not be rushed. In some previous projects developers complain that the City takes too long to approve their project, ignoring the fact that the delays were caused by the developers neglecting to foresee and address important environmental and economic details.

Originally the northeast area of Fontana was envisioned as being primarily for residential, retail and non-industrial business uses. But Fontana created an overlay zone that allowed for industrial and manufacturing uses. This overlay zone has subsumed and damaged the retail zoned properties of the area. One warehouse was intolerable; many warehouses are a disaster. Extrapolating the warehouse proliferation to the limit, all of Fontana will soon become industrial with very little retail and residential areas left. The overlay zoning should be studied and repealed by the City to stop further damage caused by the City's desperation to gain political partnerships with large developers. At minimum, a moratorium on the overlay zone should be in place.

Fontana has justified the approval of warehouses as job creators. It is now time to evaluate the results of their action. A common metric in predicting job creation is to cite jobs created per building square feet. Fontana needs to evaluate the jobs created per square foot by the existing warehouses and make adjustment for jobs lost to robotic automation.

The City needs to bring some verifiable facts to the table, like: a) How many jobs have the warehouses created or displaced? b) How many of those jobs are held by Fontana residents? c) What

are the salaries related to those jobs? d) What is the cost to the City to provide police, street maintenance, fire protection and other services for the warehouses? e) How much tax is collected from the warehouses to compensate the City for the services which the warehouses receive? f) What have been the costs, problems and benefits resulting from the warehouses? g) Have all benefits and objectives from previously approved warehouses been achieved? h) Has an economic impact report been prepared? i) How far from the warehouse do employees commute? j) What benefits have Fontana's political class gained from the warehouse developers tenants and lobbyists? Fontana needs to provide answers to these question in order to make informed decisions.

Fontana should realize that residential zoning also creates jobs. In fact, we now live in a service economy rather than in a 19th/20th century manufacturing/industrial environment. A close examination may reveal that residential zones create 21st century jobs that are not dependent upon industrial zoning. Many people now work from their homes. The incomes of plumbers, barbers, realtors, gardeners, doctors, lawyers, teachers, artists and many other professionals depend on the services required by residential customers.

It should also be realized that residential zones bring in a large amount of revenues from property, income and other taxes. Warehouses do not do the same. In fact, warehouses depress values of neighboring properties, resulting in smaller revenues. Fontana needs to reconsider its prioritizing between housing and warehousing in light of the state mandate to address the housing crisis.

The proposed warehouse project will eliminate 219 housing sites. If 219 housing units were built, governmental agencies could collect millions of dollars. If Fontana continues to allow for more warehouses to be built, property values will decrease and the revenues collected will also be diminished. Fontana should strive for a balanced economy. Warehouses should be built only in designated areas that do not harm other sectors of the City. That is why an economic impact report is essential for the decision makers and should be provided prior to approval.

Developers should not be the ones who dictate where and when warehouses are built. That should be done by well thought out City zoning laws, democratic voting and economic science.

The City of Fontana officials have the responsibility of creating a modern and well-planned City without corruption. Building an excessive number of warehouses is not going to benefit Fontana or its residents.

In spite of its growth, Fontana now is not considered by many as a desirable city to move into. Fontana should have moved mountains to get the Kaiser-Permanente medical college. That would have been a good job creator for the City and a magnet for other desirable high end businesses to move in. Approving more warehouses and discouraging more desirable businesses will not improve Fontana's image. Constant can't think of a single major company that is willing to move its headquarters or flagship store to Fontana.

Constant expects Action Items based on the following criteria:

1. Quality of life degradation due to large number of semi-trucks, frustration due to delays, traffic jams, accidents, noise, fumes;
2. Large number of warehouses/trucks on the Rialto side impact the Fontana side;
3. Encroachment to schools;
4. Encroachment to residential housing on both Fontana and Rialto sides;
5. Pedestrian blockage;
6. Handicap difficulties;
7. Extending Casa Grande into Fontana & maybe Rialto;
8. Pressure to extend several other streets into Rialto;
9. What coordination with Rialto?
10. What tax benefits or other benefits does Fontana give to the developers?
11. What restriction agreements exist between Fontana and the developers? Fontana should quantify the trending of worsening impacts and provide written responses; and
12. Cumulative environmental effects, focused on local temperature hot spots and their cumulative effect with regards to climate change.

Constant suggests the following Action Items:

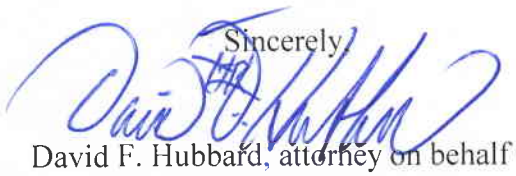
1. Fontana initiates, completes, and publicly disseminates a study that documents the impacts of both existing and future warehouses, based on future state and federal needs and guidelines.
2. Fontana disseminates all data accumulated over the past seven years of Fontana development so that independent researchers and journalists can initiate studies that are independent from Fontana's political class bias.
3. Fontana initiates an independent study of the multiple EIRs for each project in order to determine what the real world benefits and negative impacts predicted are accurate.
4. Fontana initiates a study of all new benefits and negative impacts that have been created by each project above and beyond what was analyzed in corresponding EIRs.
5. Fontana initiates a study with a focus on the false equivalency between existing zoning and the proposed RURS zoning.
6. Fontana initiates a study on the potential destruction of well established neighborhoods through developer gentrification using RURS zoning.
7. Fontana puts approval of RURS zoning to a public vote, not hidden in planning departments and city council chambers.
8. Fontana halts all warehouse development until all studies and public voting recommended in 1-7 above are complete and publicly disseminated.
9. Fontana places a moratorium on the Warehouse Overlay Zone until all studies recommended in 1-8 above are completely and publicly disseminated.
10. Fontana initiates, completes, and disseminates a study of economic and employment impacts of warehouse development over the past seven years.
11. Fontana provides and disseminates a list of all developers that the city is working with and their accompanying meeting schedules, dinner/lunch dates, places met, and admissions of any

financial dealings or lobbying as pertains to both city and personal business of all involved.

12. Fontana initiates a study comparing the future costs and benefits of warehouse development as compared to housing developments, taking into account the state mandate to address the housing crisis.
13. Fontana demands all developments complete an economic impact study in addition to EIR for all warehouse developments prior to city approval.
14. Fontana initiates a new city plan that takes into account benefits to residents and small business owners, rather than large developers and politicians.
15. Fontana initiates a program to encourage non warehouse business development so that the citizens and stakeholders of Fontana are allowed the benefits of Fontana's place on the global economic order, rather than limiting those economic benefits to developers and Fontana's political class.

Fontana's warehouse frenzy is effectively robbing Constant and many other Fontana residents and property owners of property value and development potential. Hubbard Law Firm has focused for the last twenty years on litigation and trial practice against local governments. Fontana, developers, and all associated parties will be confronted by legal action (not limited to regulatory takings analysis, 42 USC 1983 jurisprudence, and/or Civil RICO) if it does not reverse course on this proposed warehouse development and zone change.

Sincerely,



David F. Hubbard, attorney on behalf of
ROBERT N. CONSTANT

cc: Fontana City Council, et alia

From: Jimmy Barela
To: Cecily Session-Goins
Subject: Amendment to residential area for warehouses
Date: Friday, March 6, 2020 8:40:48 AM

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Do not click links or open attachments unless you recognize the sender and know the content is safe.

This is my second email to stress that the warehouses this close to residence is a nuisance. I'm sure the new homes buying built would live to know that warehouses will be right next to their homes and the late night noise we hear from the Target distribution center is loud at night. These new proposed warehouses will amplify even more noise. I vote to KEEP IT RESIDENTIAL! FONTANA has plenty of other areas that are zoned for commercial/ warehouse. There needs to be balance. Would you like a warehouse next door to tour home? Ask yourself.

Sent from my iPhone

From: Nikos Constant
To: Cecily Session-Goins
Cc: Bob and Connie; David Hubbard; Jim Constant
Subject: Re: Is the March 18 scoping meeting rescheduled?
Date: Monday, March 23, 2020 3:55:47 PM

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Ms. Session-Goins,

The following remarks are in addition to what my father, Robert Constant, sent to you via his attorney, David Hubbard.

I hope you, your family, friends, and all your co-workers are safe in these uncertain times.

It's unfortunate that the scoping meeting was not able to proceed as scheduled. Of course, a global pandemic does that. As the saying goes, "well made plans".

This pause on planet earth reminds me of one of my favorite scenes in the 1998 film, Armageddon. The protagonist, deep core driller Harry Stamper (Bruce Willis), has been tasked to go into outer space, land on an asteroid that is on a collision course with planet earth, and blow it up before it decimates every living thing. The scene I love is where the heads of NASA ask Harry to come into a scoping meeting about the asteroid and what it will take to drill into it and blow it up. Of course, NASA has never looked into real-world drilling and Harry has to tear up their bureaucratic decisions and save the day.

My father is a lot like Harry. Tough and caring over the years and, to the present day, he has outlined a list of action items that seriously addressed the vulnerabilities of Fontana city planning. While the action items should have been completed years ago, Fontana's political class' hubris has left them virtually ignored. Now the whole world has been locked down, and I'd like to take this time to make sure you understand that while not the actual cause of today's historical events, Fontana's negligence in not heeding my father, and others who have brought environmental concerns to bureaucrats, is certainly one of the many proximate causes of where we all find ourselves in 2020.

Government needs to focus on the public good. Government needs experts. And the public needs government. But over and over, Fontana has been conflating developer interests with both city planning expertise and the public good. The bias of developers (along with their deep pockets) has biased a system of planning for the public good by eliminating any outside experts and ignoring the public's health.

A perfect example of this ignorance is at present, where at a time when the whole world has been asked (and in many cases, ordered) to socially distance themselves from each other, Fontana is rezoning areas of single family homes into higher density zones in order to plan for more warehouse space. While the goods going to market will have plenty of protective space, the people are being forced, at their detriment, to stuff themselves into smaller and smaller areas. This plan is ridiculous in the context of what is going on as I write this.

Ultimately we have been warned about the dangers of a pandemic scourge on the planet. And yet Fontana seems to have ignored all the EIRs for every project from developers all along Fontana's route north on Sierra to the San Bernardino National Forest. By placing an industrial zone against this important and fragile ecosystem that all of Southern California shares, Fontana has piled on proximate danger to the planet's overall global climate danger, leading to a butterfly effect of scarcity both here and overseas, bringing all of us closer to real danger. Danger that both Harry in a fictional Armageddon—and my dad in the real world, locked inside his house, praying for this to pass so he can see his grandson in person once again—share in their urgent comments to the bureaucrats in charge.

Fontana (along with many other cities), has aided and abetted a consolidation of power in the hands of a few developers that never considered the cumulative "substantial effects" noted in any EIR, while both Fontana, and the

world now stands, unrecognizable. All to supplicate developers who spread their money around as if that money can now protect them from the dangers they themselves ignored, putting all of us in danger.

The next steps Fontana takes, coming out of this pandemic crisis, will be telling. My father's action items, again, have put Fontana on notice. Damages remain to be calculated, but it's really the human reaction that will be most telling.

Will there be admissions of wrongdoing? Will there be admissions that Fontana was wrong all along by ignoring EIRs? Will there be admissions that rezoning for added density is wrong?

Or will we all continue to suffer the effects of the wrongdoing because Fontana's political and planning class would rather risk their lives and those all around rather than suffer the indignity of having currently been proved wrong?

Either way, if we get through this, there will be a reckoning during the discovery phase of whatever trial(s) comes out of this disaster. We will indeed find out if the City of Fontana and others in Southern California have been burning down its own house to keep itself warm all these years, in a slow motion Armageddon, that is now moving as fast as an asteroid.

I agree with my father. This development needs to be immediately stopped. In addition, the exponential effects of all the cumulative "substantial effects" of every EIR and zoning change accommodated with a project's approval in Fontana should be studied and reported to the public as soon as it is safe enough to do so.

Sincerely,
Nikos Constant, Esq.

> On Mar 17, 2020, at 2:56 PM, Cecily Session-Goins <CSGoins@fontana.org> wrote:
>
> Good afternoon Nikos,
>
> Due to the COVID 19 situation, the scoping meeting for March 18 has been cancelled. If you have any written comments that you would like to share, please email them to me prior to the end of the Notice of Preparation period. Thank you in advance.
>
>
>
>
>
> Cecily Session-Goins
> Assistant Planner ? Community Development
> City of Fontana ? 8353 Sierra Ave ? Fontana, CA 92335
> CSGoins@fontana.org ? Office: (909) 350-6723
> ----------
> This email contains material that is CONFIDENTIAL and/or PRIVILEGED and for the sole use of the intended recipient. Any review, distribution or forwarding without express permission is prohibited. If you are not the intended recipient, please contact the sender and delete all copies. Thank you.-----Original Message-----
> From: Nikos Constant <nkscnstnt@gmail.com>
> Sent: Monday, March 16, 2020 11:15 AM
> To: Cecily Session-Goins <CSGoins@fontana.org>
> Cc: Bob and Connie <bobcon56@cox.net>
> Subject: Is the March 18 scoping meeting rescheduled?
>
> CAUTION - EXTERNAL SENDER - THIS EMAIL ORIGINATED OUTSIDE OF THE CITY'S EMAIL SYSTEM Do not click links or open attachments unless you recognize the sender and know the content is safe.
>
> Hello,
>
> We received notice of a March 18 5:30 pm scoping meeting for the Amended Notice of Preparation of Draft EIR

for the Sierra Avenue and Casa Grande Avenue Warehouse Project EIR.
>
> Is that meeting still on schedule, considering the Covid-19 Quarantine/Emergency?
>
> Sincerely,
> Nikos Constant
> 2132155960
>

From: Rami Rami
To: Cecily Session-Goins
Subject: Sierra and Casa Grande Warehouse
Date: Sunday, March 15, 2020 2:25:40 PM

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Hello Mrs. Goins,

My name is Rami Asad and I'm a Rialto resident but a Fontana property owner. I received a letter for a warehouse on Sierra and casa grande. I would like to ask the City to please DENY the development as this property is zoned for multi family residential NOT warehouse use. This warehouse will be too close to our homes and schools. This warehouse doesn't belong in the area as it will have homes west, East and north of it.

The City has a zoning ordinance for this reason to keep warehouses in the proper location.

Again I would like to as you to please help us stop this warehouse from developing in between our homes.

Rami Asad
909-562-2640

Sent from the road!

Appendix B

Air Quality Assessment;

Greenhouse Gas Emissions Assessment;

AQ and GHG Emissions Memo – Mango Replacement Site;

AQ and GHG Emissions Memo – Palmetto Replacement Site;

Health Risk Assessment; and

Health Risk Assessment Memo for Palmetto Site

Air Quality Assessment
Sierra Avenue and Casa Grande Warehouse Project
City of Fontana, California

Prepared by:

Kimley-Horn and Associates, Inc.
765 The City Drive, Suite 200
Orange, California 92868
Contact: Mr. Ace Malisos
714.939.1030

June 2020

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APPENDICES

Appendix A: Air Quality Modeling Data

LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
cy	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	lead
LST	local significance threshold
µg/m^3	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Governments
sf	square foot
SO_{4-2}	sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Sierra Avenue and Casa Grande Warehouse Project ("Project" or "Proposed Project"). The purpose of this Air Quality Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the level of impact the Project would have on the environment.

1.1 PROJECT LOCATION AND SETTING

The propose warehouse site is located in the northeastern portion of the City of Fontana (City); approximately 330 feet west of the City border as shown in Exhibit 1: *Regional Vicinity*. The warehouse site consists of three connected parcels on the northeast corner of the Sierra Avenue and Casa Grande Drive intersection; refer to Exhibit 2: *Local Vicinity*. Regional access would be available to the site via transportation routes including State Route 210 and Interstate Highway I-15. The State Route 210 entrance and exit is located approximately 1.5 miles south of the proposed Project via Sierra Avenue. The Interstate Highway I-15 entrance and exit is located approximately 1.6 miles north of the proposed Project via Sierra Avenue.

The warehouse site is a rectangular lot, mostly vacant, and unimproved site on approximately 16.5-gross acres (15.34-net acres) or approximately 661,561-square feet; refer to Exhibit 2**.** The northwest corner of the property is occupied by a single-family residence, while the remaining portion of the property is undeveloped land covered with natural vegetation, including two trees on the west side of the site. A concrete foundation from a former house remains on the site. Additionally, there is debris consisting of mostly rocks, dirt, tires, and an old domestic sprinkler hose. The property is zoned R-5 and R-MU for single-family residential and regional-mixed use commercial development by the City of Fontana, respectively.

1.2 PROJECT DESCRIPTION

The proposed Project involves the development of a 332,996-square feet distribution warehouse building within the approximate 16.5-gross acre (15.34-net acre) warehouse site. The warehouse would have associated facilities and improvements such as a guard booth, mezzanine (5,000-square feet), vehicle parking, loading dock doors, trailer parking, onsite and off-site landscaping, and onsite and off-site improvements; Refer to Exhibit 3**:** *Conceptual Site Plan*.

Landscaping

Onsite landscaping would be provided on the Project site. Approximately twenty-five to sixty-foot-wide landscaped buffers would be provided along the south and west boundaries and a thirty-foot-wide buffer along the northern boundary.

Project Circulation

Regional Project access would be from Interstate 215 (I-215) and State Route 210 (SR-210) via the officially designated local truck route[1] Sierra Avenue. Local access would be provided via Casa Grande Drive. Project

[1] City of Fontana, *Local Truck Route – Ordinance No. 1273*, https://www.fontana.org/DocumentCenter/View/3971/Local-Truck-Routes-2017-11x17?bidId=, accessed March 11, 2020.

site ingress and egress would be via four driveways; two approximately thirty-foot driveways on Sierra Avenue and two approximately forty-foot driveways on Casa Grande Drive.

Parking

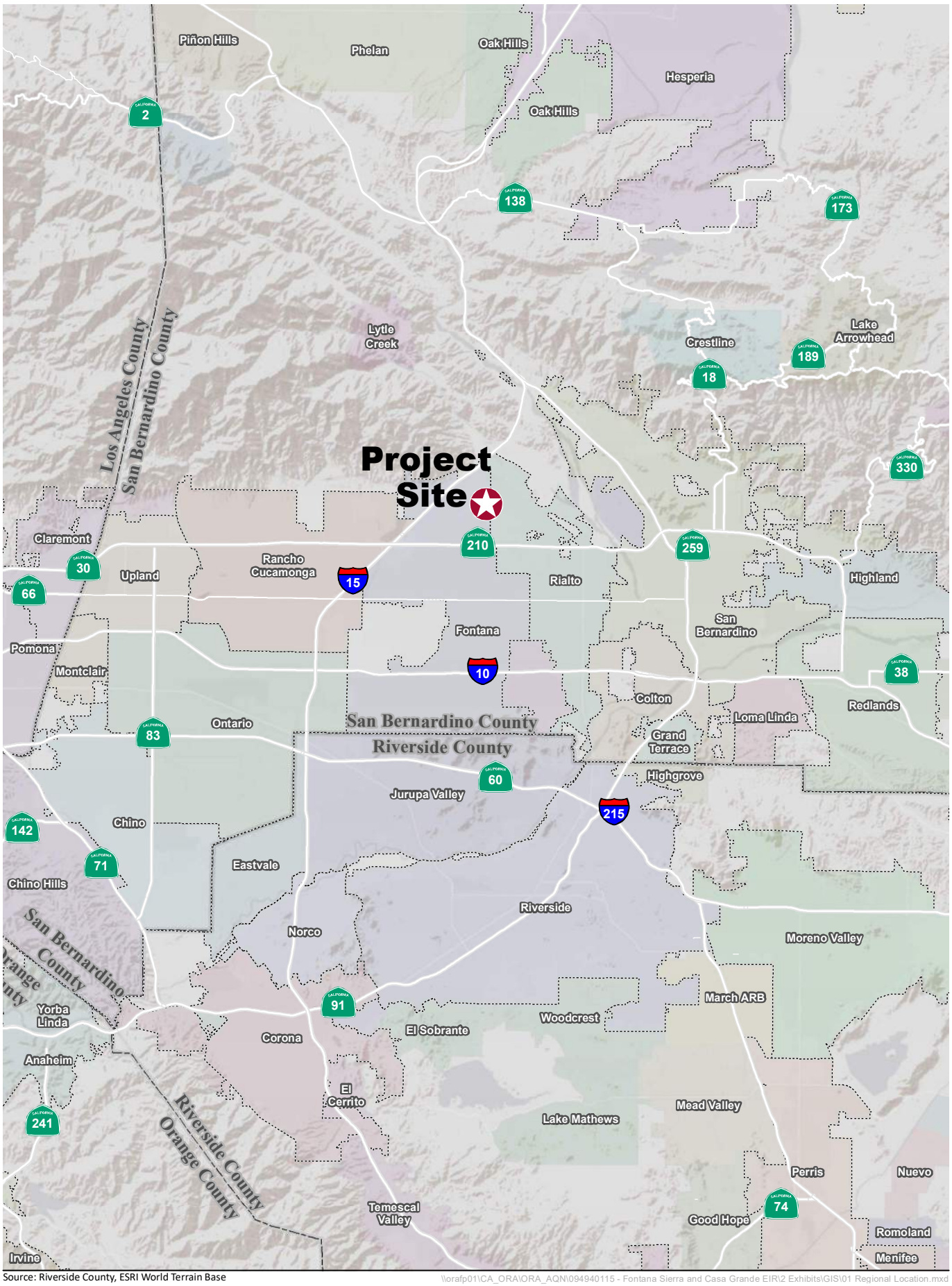
The Project would provide 134 parking stalls, 67 trailers stalls, and 35 dock doors.

Project Phasing and Construction

The Project is anticipated to be developed in one phase. Should the Project be approved, construction is anticipated to occur over a duration of approximately 15 months, commencing in the first half of 2020; the facility would be operational in late 2021.

Offsite Improvements

The Project will be responsible for approximately eighteen feet beyond the property line on Casa Grande Drive. Additionally, the Project would improve Sierra Avenue and Casa Grande Drive with approved curb, gutter, and lighting.



Source: Riverside County, ESRI World Terrain Base

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\01 Regional Location.mxd

EXHIBIT 1: Regional Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 2.5 5

Miles

Kimley»Horn



Source: ESRI World Imagery

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\02 Site Vicinity.mxd

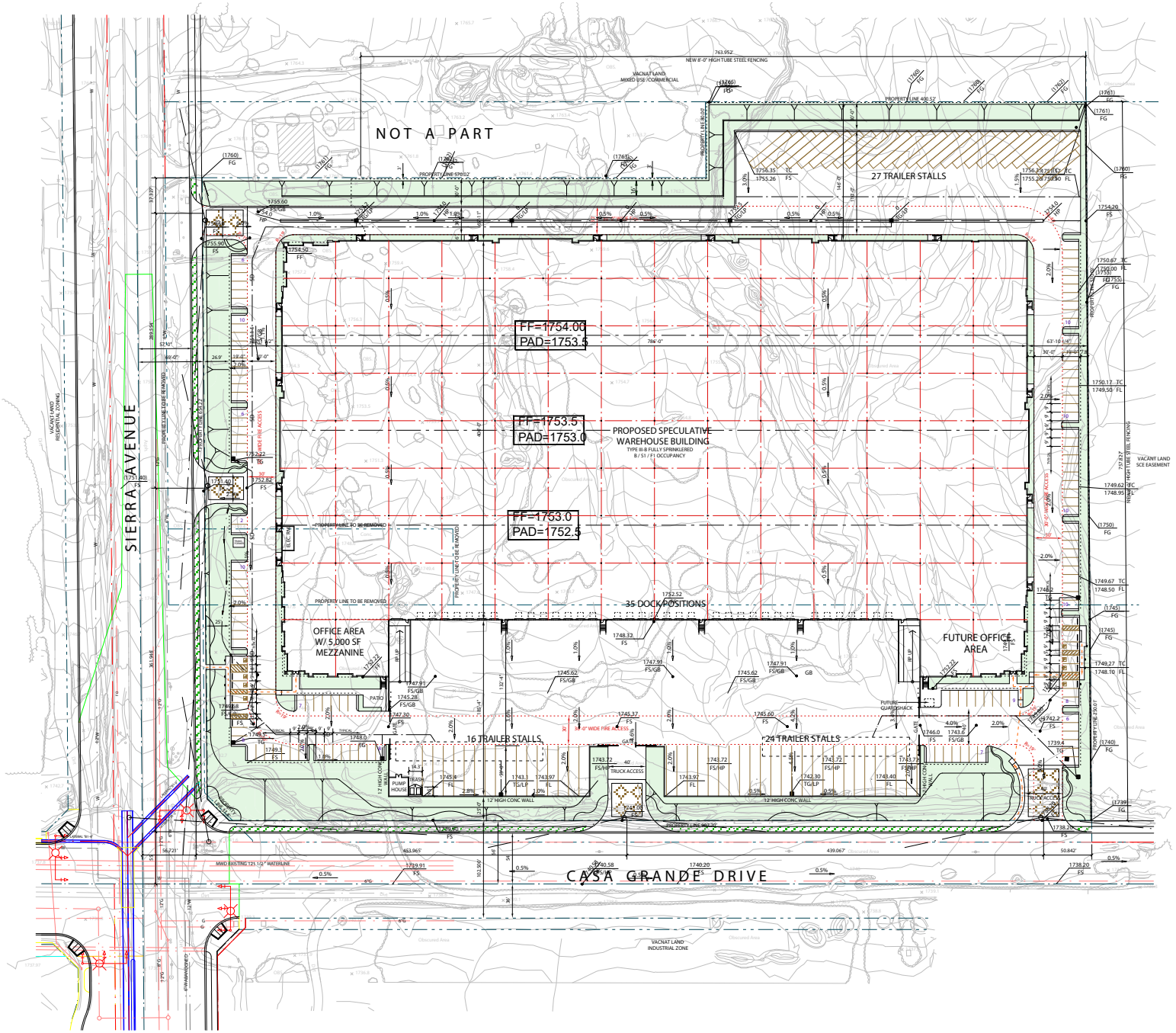
EXHIBIT 2: Site Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 250 500

Feet

Kimley»Horn



Source: RGA Office of Architectural Design

EXHIBIT 3: Conceptual Site Plan

Sierra Avenue and Casa Grande Warehouse Project

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\03 Conceptual Site Plan.mxd

Not to Scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 CLIMATE AND METEOROLOGY

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter[3]. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind patterns across the SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions.

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of

[3] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

the base of the inversion at any given time is called the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

2.2 AIR POLLUTANTS OF CONCERN

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by state and federal laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 1: Air Contaminants and Associated Public Health Concerns.

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood,

Table 1: Air Contaminants and Associated Public Health Concerns		
Pollutant	**Major Man-Made Sources**	**Human Health Effects**
	emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.
Notes: [1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).		
Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, http://www.capcoa.org/health-effects/, accessed March 11, 2020.		

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e. chronic, carcinogenic or cancer causing) adverse human health effects (i.e. injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the Project are documented by measurements made by the South Coast Air Quality Management District (SCAQMD), the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB include O_3, PM_{10}, and $PM_{2.5}$. The closest air monitoring station to the Project that monitors ambient concentrations of these pollutants is the Fontana-Arrow Monitoring Station (located approximately 5.0 miles to the southwest). Local air quality data from 2015 to 2017 are provided in Table 2: Ambient Air Quality Data, which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 2: Ambient Air Quality Data

Criteria Pollutant	2016	2017	2018
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.139	0.137	0.141
8-hour Maximum Concentration (ppm)	0.105	0.118	0.111
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	34	33	38
NAAQS 8-hour (>0.070 ppm)	49	49	69
Carbon Monoxide (CO) [1]			
1-hour Maximum Concentration (ppm)	1.66	1.62	1.92
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2) [1]			
1-hour Maximum Concentration (ppm)	71.7	69.2	63.0
Number of Days Standard Exceeded			
NAAQS 1-hour (>100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10}) [1]			
National 24-hour Maximum Concentration	94.0	75.3	64.1
State 24-hour Maximum Concentration	94.8	75.3	61.5
State Annual Average Concentration (CAAQS=20 µg/m³)	—	—	—
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m³)	0	0	0
CAAQS 24-hour (>50 µg/m³)	14	8	8
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$) [1]			
National 24-hour Maximum Concentration	58.8	39.2	29.2
State 24-hour Maximum Concentration	58.8	39.2	29.2
Number of Days Standard Exceeded			
NAAQS 24-hour (>35 µg/m³)	1	1	0

Notes:
NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m³ = micrograms per cubic meter; – = not measured
[1] Measurements taken at the Fontana-Arrow Monitoring Station at 14360 Arrow Boulevard, Fontana, California 92335 (CARB# 36197)

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).

2.3 SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project consist mostly of single-family residential communities. Sensitive land uses near the Project include the single-family residential communities 330 feet to the east and a future residential community currently under construction 215 feet to the southwest.

3 REGULATORY SETTING

3.1 FEDERAL

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in Table 3: State and Federal Ambient Air Quality Standards.

3.2 STATE OF CALIFORNIA

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 3, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in Table 3.

Table 3: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m³)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)
	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	0.10 ppm[11]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m³)	0.14 ppm (365 µg/m³)
	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m³)
Particulate Matter (PM_{10}) [1, 3, 6]	24-Hour	50 µg/m³	150 µg/m³
	Annual Arithmetic Mean	20 µg/m³	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 6, 9]	24-Hour	NA	35 µg/m³
	Annual Arithmetic Mean	12 µg/m³	12 µg/m³
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m³	NA
	Calendar Quarter	NA	1.5 µg/m³
	Rolling 3-Month Average	NA	0.15 µg/m³
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (0.15 µg/m³)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m³)	NA

Notes:

ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

1 California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

2 National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.

3 Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4 On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.

5 The national 1-hour O_3 standard was revoked by the EPA on June 15, 2005.

6 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

7 The 8-hour California O_3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

8 On June 2, 2010, the EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO_2 NAAQS.

9 In December 2012, EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

10 CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

11 National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.

3.3 REGIONAL

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that state and federal ambient air quality standards are attained and maintained in the SCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The SCAQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O_3 standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) and updated emission inventory methodologies for various source categories.

The SCAQMD has published the *CEQA Air Quality Handbook* (approved by the SCAQMD Governing Board in 1993 and augmented with guidance for Local Significance Thresholds [LST] in 2008). The SCAQMD guidance helps local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA) and provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the *CEQA Air Quality Handbook* and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SCAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The state and federal attainment status designations for the SCAB are summarized in Table 4: South Coast Air Basin Attainment Status. The SCAB is currently designated as a nonattainment area with respect to the State O_3, PM_{10}, and $PM_{2.5}$ standards, as well as the national 8-hour O_3 and $PM_{2.5}$ standards. The SCAB is designated as attainment or unclassified for the remaining state and federal standards.

Table 4: South Coast Air Basin Attainment Status		
Pollutant	**State**	**Federal**
Ozone (O_3) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–
Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2018.		

The following is a list of SCAQMD rules that are required of construction activities associated with the Project:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.

b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.

e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

3.4 LOCAL

City of Fontana General Plan

Chapter 6, Building a Healthier Fontana of the City's General Plan identifies goals that will result in a healthier city. Goals and policies that relate to air quality impacts include the following:

Goal 1: The average lifespan in Fontana is consistently within the top ten of all southern California cities.

Policy 1.3: Support local and regional initiatives to improve air quality in order to reduce asthma while actively discouraging development that may exacerbate asthma.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 AIR QUALITY THRESHOLDS

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a Project normally would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable state or federal ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

SCAQMD Thresholds

The significance criteria established by SCAQMD may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in Table 5: South Coast Air Quality Management District Emissions Thresholds.

Table 5: South Coast Air Quality Management District Emissions Thresholds (Maximum Pounds Per Day)

Criteria Air Pollutants and Precursors	Construction-Related	Operational-Related
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55

Source: South Coast Air Quality Management District, *CEQA Air Quality Significance Thresholds,* April 2019.

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the Project would also be subject to the ambient air quality standards. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project are above state and federal CO standards (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to

cause or substantially contribute to an exceedance of the most stringent state or federal ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The City of Fontana is located within SCAQMD SRA 34. Table 6: Local Significance Thresholds for Construction/Operations, shows the LSTs for a 1-acre, 2-acre, and 5-acre project in SRA 34 with sensitive receptors located within 50 meters of the Project.

Table 6: Local Significance Thresholds for Construction/Operations (Maximum Pounds Per Day)

Project Size	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
1 Acre	148/148	1,044/1,044	13/3	5/2
2 Acres	200/200	1,442/1,422	22/6	6/2
5 Acres	302/302	2,361/2,361	44/11	10/3

Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology,* July 2008.

4.2 METHODOLOGY

This air quality impact analysis considers construction and operational impacts associated with the Project. Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Air quality impacts were assessed according to methodologies recommended by CARB and the SCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 AIR QUALITY ANALYSIS

Threshold 5.1 Would the Project conflict with or obstruct implementation of the applicable air quality plan?

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project is located within the SCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment. To reduce such emissions, the SCAQMD drafted the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the CARB, the SCAG, and the EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the SCAQMD's AQMP.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1**: The Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2**: The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the SCAQMD's *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in Table 7, Table 8, and Table 9 below, the Project would not exceed the construction standards and net emissions would not exceed operational standards. Therefore, the Project would not contribute to an existing air quality violation. Thus, the Project would be consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. Although the Project requires a General Plan

Amendment (GPA) and a Zone Change, the Project would not result in a direct increase in population since the proposed warehouse would not accommodate any new residents. As such, the Project would not result in substantial unplanned growth or unaccounted for growth in the General Plan or job growth projections used by the SCAQMD to develop the AQMP. Thus, a less than significant impact would occur no impact would occur, as the Project is also consistent with the second criterion.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.2 Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable state or federal ambient air quality standard?

Construction Emissions

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include O_3-precursor pollutants (i.e. ROG and NO_X) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the Project is estimated to last approximately 9 months. Construction-generated emissions associated the Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Appendix A: Air Quality Modeling Data for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Project are summarized in in Table 7: Construction-Related Emissions.

Table 7: Construction-Related Emissions (Maximum Pounds Per Day)						
Construction Year	**Reactive Organic Gases (ROG)**	**Nitrogen Oxide (NO_x)**	**Carbon Monoxide (CO)**	**Sulfur Dioxide (SO_2)**	**Coarse Particulate Matter (PM_{10})**	**Fine Particulate Matter ($PM_{2.5}$)**
2020	4.56	50.27	32.86	0.08	8.38	4.58
2021	34.64	41.89	47.25	0.11	3.79	1.11
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Notes: SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stock piles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.						
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.						

Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. SCAQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), are applicable to the Project and were applied in CalEEMod to minimize fugitive dust emissions. Mitigation Measure AQ-1 requires the implementation of Rule 402 and 403 dust control techniques to minimize PM_{10} and $PM_{2.5}$ concentrations. The recommended mitigation measures would be required to ensure compliance with SCAQMD Rules and Regulations, which would be verified and enforced through the City's development review process.

Rule 1113 provides specifications on painting practices and regulates the ROG content of paint. As required by law, all architectural coatings for the Project structures would comply with SCAQMD Rule 1113. Table 7 shows that Project construction would not exceed ROG thresholds.

As shown in Table 7, all criteria pollutant emissions would remain below their respective thresholds. While impacts would be considered less than significant, the Project would be subject to SCAQMD Rules 402, 403, and 1113, described in the Regulatory Framework subsection above and required by Mitigation Measure AQ-1.

Operational Emissions

Project-generated emissions would be primarily associated with motor vehicle use and area sources, such as the use of landscape maintenance equipment and architectural coatings. Long-term operational emissions attributable to the Project are summarized in Table 8: Long-Term Operational Emissions. Note that emissions rates differ from summer to winter due to the formulation of fuel in California for winter and summer blends. As shown in Table 8**,** the Project emissions would not exceed SCAQMD thresholds for any criteria air pollutants. Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact.

Area Source Emissions

Area source emissions would be generated due to on-site equipment, architectural coating, and landscaping that were previously not present on the site. As shown in Table 8, area source emissions from the Project would not exceed SCAQMD thresholds for either the winter or summer seasons. Therefore, mitigation measures are not required to reduce criteria pollutants and no significant impacts are anticipated.

Energy Source Emissions

Energy source emissions would be generated due to electricity and natural gas usage associated with the Project. Primary uses of electricity and natural gas by the Project would be for miscellaneous warehouse equipment, space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. As shown in Table 8, energy source emissions from the Project would not exceed SCAQMD thresholds for criteria pollutants. As such, the Project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation. As a result, impacts associated with operational air quality would be less than significant.

Table 8: Long-Term Operational Emissions (Maximum Pounds Per Day)

Source	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Summer Emissions						
Area Source Emissions	7.12	0.00	0.06	0.00	0.0	0.00
Energy Emissions	0.02	0.19	0.16	0.00	0.01	0.01
Mobile Emissions	4.17	26.33	37.09	0.13	8.31	2.43
Off-Road Emissions	0.26	2.36	2.34	0.00	0.17	0.15
Total Emissions	**11.58**	**28.87**	**39.63**	**0.13**	**8.49**	**2.60**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Emissions						
Area Source Emissions	7.12	0.00	0.06	0.00	0.00	0.00
Energy Emissions	0.02	0.19	0.16	0.00	0.01	0.01
Mobile Emissions	3.50	27.62	34.17	0.13	8.31	2.43
Off-Road Emissions	0.26	2.36	2.34	0.00	0.17	0.15
Total Emissions	**10.90**	**30.17**	**36.72**	**0.13**	**8.49**	**2.60**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Mobile Source

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern. NO_X and ROG react with sunlight to form O_3, known as photochemical smog. Additionally, wind currents readily transport PM_{10} and $PM_{2.5}$. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using CalEEMod, as recommended by the SCAQMD. Trip generation rates associated with the Project were based on the standard rates for warehousing. Based on these rates, the Project would generate 579 daily trips (20 percent trucks).[4] As shown in Table 8, the anticipated mobile source emissions do not exceed SCAQMD thresholds for criteria pollutants. Therefore, air quality impacts associated with mobile source emissions from the Project would be less than significant.

Cumulative Short-Term Emissions

The SCAB is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. Appendix D of the SCAQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific SCAQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. The mass-based regional significance thresholds published by the SCAQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the SCAB. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in Table 7 above, Project construction-related emissions by themselves would not exceed the SCAQMD significance thresholds for criteria pollutants. Therefore, the proposed Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

The SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the FCAA mandates. The analysis assumed fugitive dust controls would be utilized during construction, including frequent water applications. SCAQMD rules, mandates, and compliance with adopted AQMP emissions control measures would also be imposed on construction projects throughout the SCAB, which would include related projects. Compliance with SCAQMD rules and regulations would further reduce the Project construction-related impacts. Therefore, Project-related construction emissions, combined with those from other projects in the area, would not substantially deteriorate local air quality. Construction emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The SCAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's existing air quality conditions. Therefore, a project that exceeds the SCAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in Table 8, the Project operational emissions would not exceed SCAQMD thresholds. As a result, operational emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Additionally, adherence to SCAQMD rules and

[4] Kimley-Horn and Associates, Inc., *Traffic Impact Study for the Proposed Sierra and Casa Grande Warehouse*, May 2020.

regulations would alleviate potential impacts related to cumulative conditions on a project-by-project basis. Project operations would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant.

Mitigation Measures:

AQ-1 Prior to the issuance of grading permits, the City Engineer shall confirm that the Grading Plan, Building Plans and Specifications require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 to minimize construction emissions of dust and particulates. The measures include, but are not limited to, the following:

- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

Level of Significance: Less than significant impact with mitigation incorporated.

Threshold 5.3 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Localized Construction Significance Analysis

The nearest sensitive receptors are the single-family residences located 230 feet (70 meters) to the northeast of the Project. To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific emissions.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 9: Equipment-Specific Grading Rates, is used to determine the maximum daily disturbed acreage for comparison to LSTs. The appropriate SRA for the localized significance thresholds is the Central San Bernardino Valley (SRA 34) since this area includes the Project. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Project construction is anticipated to disturb a maximum of 3.0 acres in a single day. As the LST guidance provides thresholds for projects disturbing 1-, 2-, and 5-acres in size and the thresholds increase with size of the site, the LSTs for a 3.0-acre threshold were interpolated and utilized for this analysis.

The SCAQMD's methodology states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors are the single-family residences located 215 feet (66 meters) northeast of the Project. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for receptors located at 50 meters were conservatively utilized in this analysis. Table 10: Localized Significance of Construction Emissions, presents the results of localized emissions during construction.

Table 9: Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Grading	Tractors	0	0.5	8	0
	Graders	1	0.5	8	0.5
	Dozers	1	0.5	8	0.5
	Scrapers	2	1	8	2
				Total Acres Graded per Day	**3.0**

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Table 10: Localized Significance of Construction Emissions (Maximum Pounds Per Day)

Construction Activity	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Site Preparation (2020)	42.42	21.51	10.33	6.49
Grading (2020)	50.20	31.96	6.08	3.62
Building Construction (2020)	19.19	16.85	1.12	1.05
Building Construction (2021)	17.43	16.58	0.96	0.90
Paving (2021)	12.92	14.65	0.68	0.62
Architectural Coating (2021)	1.53	1.82	0.09	0.09
SCAQMD Localized Screening Threshold (adjusted for 3 acres at 50 meters)	*234*	*1,748*	*29*	*7*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Table 10 shows that emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Significant impacts would not occur concerning LSTs during construction.

In addition to this air quality assessment, a separate Health Risk Assessment (HRA) has been prepared for this project. Although construction emissions did not exceed air quality thresholds, the HRA determined that mitigation was required based on the health risk. The HRA identified construction mitigation which requires the use of Tier 4 construction equipment (refer to *Health Risk Assessment: Sierra Avenue and Casa Grande Warehouse Project*, 2020).

Localized Operational Significance Analysis

According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g. warehouse or transfer facilities). Since the Project is a warehouse, the operational phase LST protocol is conservatively applied to both the area source and all the mobile source emissions. As the nearest receptors are located approximately 215 feet (66 meters) from the Project site, LSTs were interpolated for receptors located at 66 meters for SRA 34 in this analysis. Although the Project is 16.5 acres, the 5-acre LST threshold was conservatively for the Project, as the LSTs increase with the size of the site.

The LST analysis only includes on-site sources. However, the CalEEMod model outputs do not separate on- and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 11: Localized Significance of Operational Emissions, conservatively include all on-site Project-related stationary sources and 100 percent of the Project-related new mobile sources, since a portion of mobile sources could include trucks idling on-site. Table 11 shows that the maximum daily emissions of these pollutants during operations would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during operational activities.

Table 11: Localized Significance of Operational Emissions (Maximum Pounds Per Day)

Activity	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
On-Site and Mobile Source Emissions	30.17	36.72	8.49	2.60
SCAQMD Localized Screening Threshold (adjusted for 5 acres at 66 meters)	*386*	*1,100*	*17*	*4*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The SCAQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the South Coast Air Basin) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program[5] was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

[5] Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

NO_X and ROG are precursor emissions that form ozone in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. Breathing ground-level ozone can result health effects that include: reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily ozone concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that ozone can make asthma symptoms worse and can increase sensitivity to asthma triggers.

According the SCAQMD's 2016 AQMP, ozone, NO_X, and ROG have been decreasing in the Basin since 1975 and are projected to continue to decrease in the future. Although vehicle miles traveled in the Basin continue to increase, NO_X and ROG levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy. The 2016 AQMP demonstrates how the SCAQMD's control strategy to meet the 8-hour ozone standard in 2023 would lead to sufficient NO_X emission reductions to attain the 1-hour ozone standard by 2022. In addition, since NO_X emissions also lead to the formation of $PM_{2.5}$, the NO_X reductions needed to meet the ozone standards will likewise lead to improvement of $PM_{2.5}$ levels and attainment of $PM_{2.5}$ standards.

The SCAQMD's air quality modeling demonstrates that NO_X reductions prove to be much more effective in reducing ozone levels and will also lead to significant improvement in $PM_{2.5}$ concentrations. NO_X-emitting stationary sources regulated by the SCAQMD include Regional Clean Air Incentives Market (RECLAIM) facilities (e.g., refineries, power plants, etc.), natural gas combustion equipment (e.g., boilers, heaters, engines, burners, flares) and other combustion sources that burn wood or propane. The 2016 AQMP identifies robust NO_X reductions from new regulations on RECLAIM facilities, non-refinery flares, commercial cooking, and residential and commercial appliances. Such combustion sources are already heavily regulated with the lowest NO_X emissions levels achievable but there are opportunities to require and accelerate replacement with cleaner zero-emission alternatives, such as residential and commercial furnaces, pool heaters, and backup power equipment. The AQMD plans to achieve such replacements through a combination of regulations and incentives. Technology-forcing regulations can drive development and commercialization of clean technologies, with future year requirements for new or existing equipment. Incentives can then accelerate deployment and enhance public acceptability of new technologies.

The 2016 AQMD also emphasizes that beginning in 2012, continued implementation of previously adopted regulations will lead to NO_X emission reductions of 68 percent by 2023 and 80 percent by 2031. With the addition of 2016 AQMP proposed regulatory measures, a 30 percent reduction of NO_X from stationary sources is expected in the 15-year period between 2008 and 2023. This is in addition to significant NO_X reductions from stationary sources achieved in the decades prior to 2008.

As previously discussed, Project emissions would be less than significant and would not exceed SCAQMD thresholds (refer to Table 7 and Table 8). Localized effects of on-site Project emissions on nearby receptors were also found to be less than significant (refer to Table 10 and Table 11). The LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standard. The LSTs were developed by the SCAQMD based on the ambient concentrations of that pollutant for each SRA and distance to the nearest

sensitive receptor. The ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection resulting from the Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

The South Coast Air Basin (SCAB) was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP. The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the SCAQMD *CO Hotspot Analysis*, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm Federal standard. The Project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections resulting from 554 additional vehicle trips attributable to the Project. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.4 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The SCAQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources.

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g. diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Therefore, the Project would not create objectionable odors.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

6 REFERENCES

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2. California Air Pollution Control Officers Association (CAPCOA), *Health Risk Assessments for Proposed Land Use Projects*, 2009.
3. California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2015 to 2017*, 2019.
4. California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.
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7. City of Fontana, *General Plan Update 2015-2035*, November 2018
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16. United States Environmental Protection Agency, *National Ambient Air Quality Standards Table*, 2016.
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Appendix A

Air Quality Modeling Data

Sierra and Casa Grande 5/27/2020

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.11	10,000.00	0
Unrefrigerated Warehouse-No Rail	323.00	1000sqft	7.41	322,996.00	0
Parking Lot	239.15	1000sqft	5.49	239,148.00	0
Other Asphalt Surfaces	16.06	1000sqft	0.37	16,056.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra and Casa Grande 5/27/2020 - San Bernardino-South Coast County, Summer

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - Warehouse 322,996 SF + Office 10,000 SF = 332,996 SF. Not refrigerated - Building Footprint Area = 327,996 SF (5,000 SF mezzanine)
Total Parking Area including drive aisles = 239,148 SF, other surface = offsite improvements

Construction Phase - Using default construction schedule, except assume paving and painting will occur during Construction

Trips and VMT -

Grading - no import/export data available at this time

Architectural Coating - Low VOC Paint

Vehicle Trips - Based on traffic study: 579 ADT, trip rate: 579/322.996= 1.7925918587227086403546793149141

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Area Coating - Low VOC paint

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Rule 403

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - CEC - 2019 standards will reduce nonresidential energy use by 30% over 2016 standard

Water Mitigation - use low-flow fixtures

Waste Mitigation - AB 939 - divert atleast 50% of solid waste from landfills

Operational Off-Road Equipment - Assume 2 forklifts for building

Fleet Mix - Fleet Mix based on Traffic Study

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00

tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	20.00	54.00
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tblFleetMix	LHD2	5.2670e-003	0.03
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblLandUse	LandUseSquareFeet	323,000.00	322,996.00
tblLandUse	LandUseSquareFeet	239,150.00	239,148.00
tblLandUse	LotAcreage	0.23	0.11
tblLandUse	LotAcreage	7.42	7.41
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.24	0.24
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tblVehicleEF	HHD	0.04	0.04
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tblVehicleEF	HHD	3.4490e-003	6.0000e-005
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tblVehicleEF	HHD	0.01	0.01

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tblVehicleEF	HHD	9.3000e-005	3.8000e-005
tblVehicleEF	HHD	3.4490e-003	6.0000e-005
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tblVehicleEF	HHD	1.17	0.25
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tblVehicleEF	HHD	0.03	0.03

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tblVehicleEF	HHD	0.03	0.03
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tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
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tblVehicleEF	LDA	0.11	0.11

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tblVehicleEF	LDT2	8.5100e-004	7.1700e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LDT2	7.8730e-003	5.5830e-003
tblVehicleEF	LDT2	7.7350e-003	0.07

tblVehicleEF	LDT2	1.04	1.31
tblVehicleEF	LDT2	1.53	2.36
tblVehicleEF	LDT2	397.09	369.05
tblVehicleEF	LDT2	81.97	71.61
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
tblVehicleEF	LDT2	1.5980e-003	1.5480e-003
tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6510e-003
tblVehicleEF	LDT2	8.4600e-004	7.0900e-004
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8730e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.05

tblVehicleEF	LDT2	1.82	2.82
tblVehicleEF	LDT2	355.82	341.80
tblVehicleEF	LDT2	81.97	72.52
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
tblVehicleEF	LDT2	1.5980e-003	1.5480e-003
tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
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tblVehicleEF	LDT2	8.5100e-004	7.1800e-004
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.6980e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43

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tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.01	9.8530e-003
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tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
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tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
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tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
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tblVehicleEF	LHD1	3.6200e-004	1.0200e-004
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tblVehicleEF	LHD1	0.11	0.08
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tblVehicleEF	LHD1	0.11	0.08
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tblVehicleEF	LHD1	614.92	661.62
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tblVehicleEF	LHD1	2.12	1.29
tblVehicleEF	LHD1	0.97	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.01	9.8530e-003
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tblVehicleEF	LHD1	7.5090e-003	0.08

tblVehicleEF	LHD1	0.13	0.09
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tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.27	0.07
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tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.30	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.7060e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
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tblVehicleEF	LHD1	614.92	661.60
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tblVehicleEF	LHD1	0.09	1.08
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tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.01	9.8530e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5280e-003	2.4630e-003
tblVehicleEF	LHD1	0.01	9.8740e-003
tblVehicleEF	LHD1	9.2600e-004	2.2500e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4470e-003
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tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD2	3.8190e-003	0.05

tblVehicleEF	LHD2	5.2410e-003	4.4730e-003
tblVehicleEF	LHD2	9.1660e-003	9.5030e-003
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tblVehicleEF	LHD2	0.56	0.20
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
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tblVehicleEF	LHD2	2.6810e-003	2.6480e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1400e-004
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tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003

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tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
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tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
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tblVehicleEF	LHD2	2.6810e-003	2.6480e-003

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tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003
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tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
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tblVehicleEF	LHD2	614.63	675.54

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tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	2.6810e-003	2.6480e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1400e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003
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tblVehicleEF	LHD2	1.4600e-003	0.02
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tblVehicleEF	LHD2	0.02	0.32
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tblVehicleEF	LHD2	0.10	0.31
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tblVehicleEF	MCY	0.00	2.35
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	21.02	19.60
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tblVehicleEF	MCY	167.12	212.10
tblVehicleEF	MCY	46.87	61.05
tblVehicleEF	MCY	1.17	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
tblVehicleEF	MCY	3.5370e-003	2.8420e-003
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85
tblVehicleEF	MCY	2.0790e-003	2.0990e-003
tblVehicleEF	MCY	6.9500e-004	6.0400e-004
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88

tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
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tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
tblVehicleEF	MCY	3.5370e-003	2.8420e-003
tblVehicleEF	MCY	3.14	5.54
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tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	1.87	1.62
tblVehicleEF	MCY	2.0790e-003	2.0970e-003
tblVehicleEF	MCY	6.7100e-004	5.8600e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83

tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	2.03	1.77
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
tblVehicleEF	MCY	46.87	60.69
tblVehicleEF	MCY	1.13	1.10
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
tblVehicleEF	MCY	3.5370e-003	2.8420e-003
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0900e-003
tblVehicleEF	MCY	6.8600e-004	6.0100e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86

tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98
tblVehicleEF	MDV	0.01	6.4810e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.30
tblVehicleEF	MDV	3.59	3.43
tblVehicleEF	MDV	498.66	426.46
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tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2170e-003
tblVehicleEF	MDV	1.1710e-003	8.8700e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51

tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MDV	0.02	7.2390e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.54
tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4570e-003
tblVehicleEF	MDV	1.1600e-003	8.7600e-004
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45

tblVehicleEF	MDV	0.01	6.3480e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.44
tblVehicleEF	MDV	488.33	421.93
tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1720e-003
tblVehicleEF	MDV	1.1700e-003	8.8700e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.26
tblVehicleEF	MH	1.64	1.53
tblVehicleEF	MH	0.95	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.2000e-004	1.9100e-004
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.44	0.11

tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.74	1.58
tblVehicleEF	MH	6.31	2.05
tblVehicleEF	MH	1,048.28	1,507.73
tblVehicleEF	MH	59.91	19.00
tblVehicleEF	MH	1.50	1.42
tblVehicleEF	MH	0.90	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0900e-004	1.8800e-004
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59

tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.61	1.54
tblVehicleEF	MH	6.87	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.27
tblVehicleEF	MH	1.61	1.50
tblVehicleEF	MH	0.94	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.1900e-004	1.9100e-004
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.17	0.10

tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.43	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1450e-003	5.9780e-003
tblVehicleEF	MHD	0.06	3.0950e-003
tblVehicleEF	MHD	0.33	3.22
tblVehicleEF	MHD	0.31	0.52
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tblVehicleEF	MHD	1,105.72	1,006.19
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tblVehicleEF	MHD	1.08	2.32
tblVehicleEF	MHD	11.74	1.38
tblVehicleEF	MHD	4.3700e-004	0.02
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	4.1800e-004	0.02
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	1.4330e-003	4.5970e-003
tblVehicleEF	MHD	0.05	7.3280e-003
tblVehicleEF	MHD	0.02	0.18
tblVehicleEF	MHD	7.1400e-004	2.3840e-003
tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02

tblVehicleEF	MHD	1.4910e-003	7.3950e-003
tblVehicleEF	MHD	0.01	9.5620e-003
tblVehicleEF	MHD	6.4400e-004	3.0000e-005
tblVehicleEF	MHD	1.4330e-003	4.5970e-003
tblVehicleEF	MHD	0.05	7.3280e-003
tblVehicleEF	MHD	0.03	0.23
tblVehicleEF	MHD	7.1400e-004	2.3840e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.40	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2290e-003	6.0070e-003
tblVehicleEF	MHD	0.05	2.9710e-003
tblVehicleEF	MHD	0.24	2.72
tblVehicleEF	MHD	0.32	0.52
tblVehicleEF	MHD	5.61	0.34
tblVehicleEF	MHD	164.29	793.74
tblVehicleEF	MHD	1,105.72	1,006.20
tblVehicleEF	MHD	53.92	2.96
tblVehicleEF	MHD	0.65	6.98
tblVehicleEF	MHD	1.01	2.18
tblVehicleEF	MHD	11.70	1.38
tblVehicleEF	MHD	3.6900e-004	0.02
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	3.5300e-004	0.02
tblVehicleEF	MHD	5.3330e-003	0.06

tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	2.8480e-003	8.4260e-003
tblVehicleEF	MHD	0.05	8.5070e-003
tblVehicleEF	MHD	0.02	0.17
tblVehicleEF	MHD	1.6690e-003	4.8010e-003
tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	1.5770e-003	7.5180e-003
tblVehicleEF	MHD	0.01	9.5630e-003
tblVehicleEF	MHD	6.3800e-004	2.9000e-005
tblVehicleEF	MHD	2.8480e-003	8.4260e-003
tblVehicleEF	MHD	0.05	8.5070e-003
tblVehicleEF	MHD	0.03	0.22
tblVehicleEF	MHD	1.6690e-003	4.8010e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.38	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	4.1530e-003	5.9780e-003
tblVehicleEF	MHD	0.06	3.0730e-003
tblVehicleEF	MHD	0.46	3.91
tblVehicleEF	MHD	0.31	0.52
tblVehicleEF	MHD	5.90	0.36
tblVehicleEF	MHD	142.41	762.95
tblVehicleEF	MHD	1,105.72	1,006.19
tblVehicleEF	MHD	53.92	2.99

tblVehicleEF	MHD	0.60	6.81
tblVehicleEF	MHD	1.06	2.28
tblVehicleEF	MHD	11.73	1.38
tblVehicleEF	MHD	5.3200e-004	0.03
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	5.0900e-004	0.03
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	1.5800e-003	4.8400e-003
tblVehicleEF	MHD	0.05	8.2350e-003
tblVehicleEF	MHD	0.03	0.19
tblVehicleEF	MHD	7.0500e-004	2.4390e-003
tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02
tblVehicleEF	MHD	1.3710e-003	7.2250e-003
tblVehicleEF	MHD	0.01	9.5620e-003
tblVehicleEF	MHD	6.4300e-004	3.0000e-005
tblVehicleEF	MHD	1.5800e-003	4.8400e-003
tblVehicleEF	MHD	0.05	8.2350e-003
tblVehicleEF	MHD	0.04	0.24
tblVehicleEF	MHD	7.0500e-004	2.4390e-003
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tblVehicleEF	MHD	0.39	0.02
tblVehicleEF	OBUS	0.01	0.13

tblVehicleEF	OBUS	0.01	8.8680e-003
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tblVehicleEF	OBUS	0.27	9.46
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tblVehicleEF	OBUS	1.1300e-004	0.04
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4500e-004
tblVehicleEF	OBUS	1.0800e-004	0.04
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	9.4600e-004	0.01
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.41	0.08
tblVehicleEF	OBUS	6.8200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2800e-004	1.3700e-004

tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	9.4600e-004	0.01
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tblVehicleEF	OBUS	1,126.32	1,439.51
tblVehicleEF	OBUS	71.08	13.65
tblVehicleEF	OBUS	0.33	9.91
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tblVehicleEF	OBUS	1.92	0.99
tblVehicleEF	OBUS	9.5000e-005	0.03
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4500e-004
tblVehicleEF	OBUS	9.1000e-005	0.03
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02

tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	2.1830e-003	0.03
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.39	0.08
tblVehicleEF	OBUS	7.1200e-004	0.01
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tblVehicleEF	OBUS	8.1800e-004	1.3500e-004
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tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	2.1830e-003	0.03
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tblVehicleEF	OBUS	1.08	1.61
tblVehicleEF	OBUS	1.96	0.99

tblVehicleEF	OBUS	1.3700e-004	0.05
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tblVehicleEF	OBUS	1.3100e-004	0.04
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tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.01	0.04
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tblVehicleEF	SBUS	0.03	0.04
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tblVehicleEF	SBUS	2.7630e-003	2.7030e-003
tblVehicleEF	SBUS	0.03	0.03
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tblVehicleEF	SBUS	0.01	0.03
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tblVehicleEF	SBUS	4.5600e-004	1.4600e-004
tblVehicleEF	SBUS	3.0740e-003	0.02

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tblVehicleEF	SBUS	1.3130e-003	7.4840e-003
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tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.4940e-003
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2800e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7630e-003	2.7030e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1800e-004
tblVehicleEF	SBUS	5.9210e-003	0.03

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tblVehicleEF	SBUS	0.23	0.09
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	1.3500e-004
tblVehicleEF	SBUS	5.9210e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.96	4.83
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.25	0.10
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3430e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.85	29.24
tblVehicleEF	SBUS	0.71	0.85
tblVehicleEF	SBUS	5.54	2.67
tblVehicleEF	SBUS	1,181.05	3,221.61
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.98
tblVehicleEF	SBUS	11.91	29.59
tblVehicleEF	SBUS	5.09	5.42

tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2800e-004
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	2.7630e-003	2.7030e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1800e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.2980e-003	7.7230e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.29	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4800e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.2980e-003	7.7230e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.32	0.12
tblVehicleEF	UBUS	1.95	4.45

tblVehicleEF	UBUS	0.09	9.2990e-003
tblVehicleEF	UBUS	9.79	34.75
tblVehicleEF	UBUS	14.93	0.84
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.67
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	13.77	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
tblVehicleEF	UBUS	8.4220e-003	3.8760e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2710e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.19	0.03
tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.6230e-003	1.0600e-004
tblVehicleEF	UBUS	8.4220e-003	3.8760e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2710e-003
tblVehicleEF	UBUS	2.68	4.54

tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.30	0.04
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.08	8.4410e-003
tblVehicleEF	UBUS	9.90	34.75
tblVehicleEF	UBUS	12.23	0.71
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.47
tblVehicleEF	UBUS	5.98	0.38
tblVehicleEF	UBUS	13.65	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
tblVehicleEF	UBUS	0.02	7.1140e-003
tblVehicleEF	UBUS	0.15	8.7360e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	0.67	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.5760e-003	1.0400e-004
tblVehicleEF	UBUS	0.02	7.1140e-003

tblVehicleEF	UBUS	0.15	8.7360e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	2.69	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.16	0.03
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3770e-003
tblVehicleEF	UBUS	9.80	34.75
tblVehicleEF	UBUS	14.43	0.85
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.69
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	13.74	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
tblVehicleEF	UBUS	9.6690e-003	4.0000e-003
tblVehicleEF	UBUS	0.15	8.2160e-003
tblVehicleEF	UBUS	4.2700e-003	2.3060e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03

tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.6140e-003	1.0600e-004
tblVehicleEF	UBUS	9.6690e-003	4.0000e-003
tblVehicleEF	UBUS	0.15	8.2160e-003
tblVehicleEF	UBUS	4.2700e-003	2.3060e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	1.79
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	1.79
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	1.68	1.79

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5593	50.2676	32.8577	0.0795	18.2675	2.1987	20.4662	9.9840	2.0228	12.0069	0.0000	7,943.3171	7,943.3171	1.9493	0.0000	7,965.3169
2021	34.6354	41.8916	47.2540	0.1112	3.9777	1.7676	5.7453	1.0686	1.6536	2.7222	0.0000	11,021.2855	11,021.2855	1.6123	0.0000	11,061.5925
Maximum	**34.6354**	**50.2676**	**47.2540**	**0.1112**	**18.2675**	**2.1987**	**20.4662**	**9.9840**	**2.0228**	**12.0069**	**0.0000**	**11,021.2855**	**11,021.2855**	**1.9493**	**0.0000**	**11,061.5925**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.9176	12.9916	33.8986	0.0795	8.3153	0.1039	8.3787	4.5183	0.1029	4.5816	0.0000	7,943.3171	7,943.3171	1.9493	0.0000	7,965.3169
2021	31.8980	13.5924	50.7964	0.1112	3.6750	0.1193	3.7943	0.9943	0.1169	1.1112	0.0000	11,021.2855	11,021.2855	1.6123	0.0000	11,061.5925
Maximum	**31.8980**	**13.5924**	**50.7964**	**0.1112**	**8.3153**	**0.1193**	**8.3787**	**4.5183**	**0.1169**	**4.5816**	**0.0000**	**11,021.2855**	**11,021.2855**	**1.9493**	**0.0000**	**11,061.5925**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.72**	**71.15**	**-5.72**	**0.00**	**46.10**	**94.37**	**53.56**	**50.12**	**94.02**	**61.35**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Energy	0.0204	0.1854	0.1558	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.5244	222.5244	4.2700e-003	4.0800e-003	223.8467
Mobile	4.1747	26.3314	37.0825	0.1309	8.0307	0.2758	8.3065	2.1629	0.2673	2.4302		13,823.9671	13,823.9671	0.6525		13,840.2785
Offroad	0.2587	2.3583	2.3357	3.0600e-003		0.1674	0.1674		0.1540	0.1540		296.0617	296.0617	0.0958		298.4555
Total	**11.5751**	**28.8757**	**39.6343**	**0.1351**	**8.0307**	**0.4575**	**8.4882**	**2.1629**	**0.4356**	**2.5985**		**14,342.6819**	**14,342.6819**	**0.7528**	**4.0800e-003**	**14,362.7180**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Energy	0.0144	0.1306	0.1097	7.8000e-004		9.9200e-003	9.9200e-003		9.9200e-003	9.9200e-003		156.7040	156.7040	3.0000e-003	2.8700e-003	157.6353
Mobile	4.1613	26.1548	36.7918	0.1297	7.9404	0.2729	8.2133	2.1386	0.2645	2.4031		13,689.6023	13,689.6023	0.6465		13,705.7646
Offroad	0.2587	2.3583	2.3357	3.0600e-003		0.1674	0.1674		0.1540	0.1540		296.0617	296.0617	0.0958		298.4555
Total	**11.5557**	**28.6442**	**39.2975**	**0.1335**	**7.9404**	**0.4504**	**8.3908**	**2.1386**	**0.4287**	**2.5673**		**14,142.4967**	**14,142.4967**	**0.7456**	**2.8700e-003**	**14,161.9926**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.17**	**0.80**	**0.85**	**1.19**	**1.12**	**1.55**	**1.15**	**1.12**	**1.59**	**1.20**	**0.00**	**1.40**	**1.40**	**0.96**	**29.66**	**1.40**

3.0 Construction Detail

Construction Phase

Sierra and Casa Grande 5/27/2020 - San Bernardino-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2020	6/12/2020	5	10	
2	Grading	Grading	6/13/2020	7/24/2020	5	30	
3	Building Construction	Building Construction	7/25/2020	9/17/2021	5	300	
4	Paving	Paving	6/18/2021	9/1/2021	5	54	
5	Architectural Coating	Architectural Coating	6/18/2021	9/1/2021	5	54	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 499,494; Non-Residential Outdoor: 166,498; Striped Parking Area: 14,349 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	239.00	94.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0982	0.0631	0.8095	2.0400e-003	0.2012	1.3200e-003	0.2025	0.0534	1.2100e-003	0.0546		203.4151	203.4151	6.2100e-003		203.5704
Total	**0.0982**	**0.0631**	**0.8095**	**2.0400e-003**	**0.2012**	**1.3200e-003**	**0.2025**	**0.0534**	**1.2100e-003**	**0.0546**		**203.4151**	**203.4151**	**6.2100e-003**		**203.5704**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**8.1298**	**0.0621**	**8.1919**	**4.4688**	**0.0621**	**4.5309**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0982	0.0631	0.8095	2.0400e-003	0.1855	1.3200e-003	0.1868	0.0495	1.2100e-003	0.0507		203.4151	203.4151	6.2100e-003		203.5704
Total	**0.0982**	**0.0631**	**0.8095**	**2.0400e-003**	**0.1855**	**1.3200e-003**	**0.1868**	**0.0495**	**1.2100e-003**	**0.0507**		**203.4151**	**203.4151**	**6.2100e-003**		**203.5704**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1092	0.0701	0.8995	2.2700e-003	0.2236	1.4600e-003	0.2250	0.0593	1.3500e-003	0.0606		226.0168	226.0168	6.9000e-003		226.1893
Total	**0.1092**	**0.0701**	**0.8995**	**2.2700e-003**	**0.2236**	**1.4600e-003**	**0.2250**	**0.0593**	**1.3500e-003**	**0.0606**		**226.0168**	**226.0168**	**6.9000e-003**		**226.1893**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**3.9030**	**0.1015**	**4.0045**	**1.6184**	**0.1015**	**1.7200**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1092	0.0701	0.8995	2.2700e-003	0.2061	1.4600e-003	0.2075	0.0550	1.3500e-003	0.0563		226.0168	226.0168	6.9000e-003		226.1893
Total	**0.1092**	**0.0701**	**0.8995**	**2.2700e-003**	**0.2061**	**1.4600e-003**	**0.2075**	**0.0550**	**1.3500e-003**	**0.0563**		**226.0168**	**226.0168**	**6.9000e-003**		**226.1893**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2854	9.9197	1.9332	0.0255	0.6021	0.0457	0.6477	0.1734	0.0437	0.2170		2,689.3530	2,689.3530	0.1747		2,693.7201
Worker	1.3044	0.8372	10.7485	0.0271	2.6715	0.0175	2.6890	0.7085	0.0161	0.7246		2,700.9011	2,700.9011	0.0825		2,702.9624
Total	**1.5898**	**10.7569**	**12.6817**	**0.0526**	**3.2735**	**0.0632**	**3.3367**	**0.8818**	**0.0598**	**0.9416**		**5,390.2541**	**5,390.2541**	**0.2571**		**5,396.6824**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2854	9.9197	1.9332	0.0255	0.5635	0.0457	0.6091	0.1639	0.0437	0.2076		2,689.3530	2,689.3530	0.1747		2,693.7201
Worker	1.3044	0.8372	10.7485	0.0271	2.4624	0.0175	2.4799	0.6572	0.0161	0.6733		2,700.9011	2,700.9011	0.0825		2,702.9624
Total	**1.5898**	**10.7569**	**12.6817**	**0.0526**	**3.0259**	**0.0632**	**3.0891**	**0.8211**	**0.0598**	**0.8809**		**5,390.2541**	**5,390.2541**	**0.2571**		**5,396.6824**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2433	9.0651	1.7058	0.0254	0.6020	0.0155	0.6176	0.1734	0.0149	0.1882		2,675.1395	2,675.1395	0.1691		2,679.3659
Worker	1.2144	0.7506	9.8942	0.0263	2.6715	0.0171	2.6885	0.7085	0.0157	0.7242		2,614.8524	2,614.8524	0.0744		2,616.7130
Total	**1.4576**	**9.8157**	**11.6000**	**0.0516**	**3.2735**	**0.0326**	**3.3061**	**0.8818**	**0.0306**	**0.9124**		**5,289.9919**	**5,289.9919**	**0.2435**		**5,296.0789**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2433	9.0651	1.7058	0.0254	0.5635	0.0155	0.5790	0.1639	0.0149	0.1787		2,675.1395	2,675.1395	0.1691		2,679.3659
Worker	1.2144	0.7506	9.8942	0.0263	2.4624	0.0171	2.4795	0.6572	0.0157	0.6729		2,614.8524	2,614.8524	0.0744		2,616.7130
Total	**1.4576**	**9.8157**	**11.6000**	**0.0516**	**3.0259**	**0.0326**	**3.0585**	**0.8211**	**0.0306**	**0.8517**		**5,289.9919**	**5,289.9919**	**0.2435**		**5,296.0789**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.2843					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5399**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.2843					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5648**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1546	1.0700e-003	0.1556	0.0413	9.9000e-004	0.0422		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1546**	**1.0700e-003**	**0.1556**	**0.0413**	**9.9000e-004**	**0.0422**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.1980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**29.4169**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2439	0.1508	1.9871	5.2700e-003	0.5365	3.4300e-003	0.5400	0.1423	3.1600e-003	0.1455		525.1587	525.1587	0.0150		525.5323
Total	**0.2439**	**0.1508**	**1.9871**	**5.2700e-003**	**0.5365**	**3.4300e-003**	**0.5400**	**0.1423**	**3.1600e-003**	**0.1455**		**525.1587**	**525.1587**	**0.0150**		**525.5323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.1980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**29.2277**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2439	0.1508	1.9871	5.2700e-003	0.4946	3.4300e-003	0.4980	0.1320	3.1600e-003	0.1352		525.1587	525.1587	0.0150		525.5323
Total	**0.2439**	**0.1508**	**1.9871**	**5.2700e-003**	**0.4946**	**3.4300e-003**	**0.4980**	**0.1320**	**3.1600e-003**	**0.1352**		**525.1587**	**525.1587**	**0.0150**		**525.5323**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Implement Trip Reduction Program

Employee Vanpool/Shuttle

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1613	26.1548	36.7918	0.1297	7.9404	0.2729	8.2133	2.1386	0.2645	2.4031		13,689.6023	13,689.6023	0.6465		13,705.7646
Unmitigated	4.1747	26.3314	37.0825	0.1309	8.0307	0.2758	8.3065	2.1629	0.2673	2.4302		13,823.9671	13,823.9671	0.6525		13,840.2785

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	579.01	579.01	579.01	3,704,926	3,663,269
Total	579.01	579.01	579.01	3,704,926	3,663,269

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Unrefrigerated Warehouse-No Rail	0.436242	0.037123	0.179649	0.119457	0.017229	0.034600	0.046400	0.123300	0.000000	0.000000	0.006000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0144	0.1306	0.1097	7.8000e-004		9.9200e-003	9.9200e-003		9.9200e-003	9.9200e-003		156.7040	156.7040	3.0000e-003	2.8700e-003	157.6353
NaturalGas Unmitigated	0.0204	0.1854	0.1558	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.5244	222.5244	4.2700e-003	4.0800e-003	223.8467

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	95.0685	1.0300e-003	9.3200e-003	7.8300e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.1845	11.1845	2.1000e-004	2.1000e-004	11.2510
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1796.39	0.0194	0.1761	0.1479	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.3399	211.3399	4.0500e-003	3.8700e-003	212.5957
Total		**0.0204**	**0.1854**	**0.1558**	**1.1200e-003**		**0.0141**	**0.0141**		**0.0141**	**0.0141**		**222.5244**	**222.5244**	**4.2600e-003**	**4.0800e-003**	**223.8467**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0665479	7.2000e-004	6.5200e-003	5.4800e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		7.8292	7.8292	1.5000e-004	1.4000e-004	7.8757
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.26544	0.0137	0.1241	0.1042	7.4000e-004		9.4300e-003	9.4300e-003		9.4300e-003	9.4300e-003		148.8749	148.8749	2.8500e-003	2.7300e-003	149.7596
Total		**0.0144**	**0.1306**	**0.1097**	**7.8000e-004**		**9.9300e-003**	**9.9300e-003**		**9.9300e-003**	**9.9300e-003**		**156.7040**	**156.7040**	**3.0000e-003**	**2.8700e-003**	**157.6353**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Unmitigated	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.6837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.6300e-003	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Total	**7.1213**	**5.5000e-004**	**0.0603**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1287**	**0.1287**	**3.4000e-004**		**0.1373**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.6837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.6300e-003	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Total	**7.1213**	**5.5000e-004**	**0.0603**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1287**	**0.1287**	**3.4000e-004**		**0.1373**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	8.00	260	89	0.20	Electrical

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.2587	2.3583	2.3357	3.0600e-003		0.1674	0.1674		0.1540	0.1540		296.0617	296.0617	0.0958		298.4555
Total	**0.2587**	**2.3583**	**2.3357**	**3.0600e-003**		**0.1674**	**0.1674**		**0.1540**	**0.1540**		**296.0617**	**296.0617**	**0.0958**		**298.4555**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra and Casa Grande 5/27/2020

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.11	10,000.00	0
Unrefrigerated Warehouse-No Rail	323.00	1000sqft	7.41	322,996.00	0
Parking Lot	239.15	1000sqft	5.49	239,148.00	0
Other Asphalt Surfaces	16.06	1000sqft	0.37	16,056.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra and Casa Grande 5/27/2020 - San Bernardino-South Coast County, Winter

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - Warehouse 322,996 SF + Office 10,000 SF = 332,996 SF. Not refrigerated - Building Footprint Area = 327,996 SF (5,000 SF mezzanine)
Total Parking Area including drive aisles = 239,148 SF, other surface = offsite improvements

Construction Phase - Using default construction schedule, except assume paving and painting will occur during Construction

Trips and VMT -

Grading - no import/export data available at this time

Architectural Coating - Low VOC Paint

Vehicle Trips - Based on traffic study: 579 ADT, trip rate: 579/322.996= 1.792591858722708640354679314 9141

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Area Coating - Low VOC paint

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Rule 403

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - CEC - 2019 standards will reduce nonresidential energy use by 30% over 2016 standard

Water Mitigation - use low-flow fixtures

Waste Mitigation - AB 939 - divert atleast 50% of solid waste from landfills

Operational Off-Road Equipment - Assume 2 forklifts for building

Fleet Mix - Fleet Mix based on Traffic Study

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00

tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	20.00	54.00
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tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblLandUse	LandUseSquareFeet	323,000.00	322,996.00
tblLandUse	LandUseSquareFeet	239,150.00	239,148.00
tblLandUse	LotAcreage	0.23	0.11
tblLandUse	LotAcreage	7.42	7.41
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
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tblVehicleEF	LDA	0.13	0.12
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tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46

tblVehicleEF	LDA	0.02	0.02
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tblVehicleEF	LDA	2.3020e-003	1.9440e-003
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tblVehicleEF	LDA	2.1170e-003	1.7870e-003
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.24
tblVehicleEF	LDA	2.5640e-003	2.6430e-003
tblVehicleEF	LDA	6.1500e-004	5.4900e-004
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.02

tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.27
tblVehicleEF	LDT1	0.02	8.7920e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.71	1.72
tblVehicleEF	LDT1	4.02	2.48
tblVehicleEF	LDT1	323.73	321.83
tblVehicleEF	LDT1	72.77	67.22
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	2.8630e-003	2.5670e-003
tblVehicleEF	LDT1	3.8930e-003	3.0690e-003
tblVehicleEF	LDT1	2.6370e-003	2.3630e-003
tblVehicleEF	LDT1	3.5800e-003	2.8220e-003
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.29	0.47
tblVehicleEF	LDT1	3.2600e-003	3.1850e-003
tblVehicleEF	LDT1	7.9900e-004	6.6500e-004
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.66
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.93

tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT1	0.02	9.8170e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	2.05	2.04
tblVehicleEF	LDT1	3.30	2.07
tblVehicleEF	LDT1	352.65	345.31
tblVehicleEF	LDT1	72.77	66.35
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.8630e-003	2.5670e-003
tblVehicleEF	LDT1	3.8930e-003	3.0690e-003
tblVehicleEF	LDT1	2.6370e-003	2.3630e-003
tblVehicleEF	LDT1	3.5800e-003	2.8220e-003
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4170e-003
tblVehicleEF	LDT1	7.8600e-004	6.5700e-004
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	1.26
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.26	0.44

tblVehicleEF	LDT1	0.01	8.6230e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.62	1.66
tblVehicleEF	LDT1	3.95	2.48
tblVehicleEF	LDT1	316.91	317.45
tblVehicleEF	LDT1	72.77	67.23
tblVehicleEF	LDT1	0.17	0.14
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	2.8630e-003	2.5670e-003
tblVehicleEF	LDT1	3.8930e-003	3.0690e-003
tblVehicleEF	LDT1	2.6370e-003	2.3630e-003
tblVehicleEF	LDT1	3.5800e-003	2.8220e-003
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.1410e-003
tblVehicleEF	LDT1	7.9800e-004	6.6500e-004
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.63
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT2	6.9330e-003	4.9710e-003

tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.09
tblVehicleEF	LDT2	1.85	2.82
tblVehicleEF	LDT2	363.70	346.08
tblVehicleEF	LDT2	81.97	72.50
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
tblVehicleEF	LDT2	1.5980e-003	1.5480e-003
tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.36
tblVehicleEF	LDT2	3.6440e-003	3.4240e-003
tblVehicleEF	LDT2	8.5100e-004	7.1700e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LDT2	7.8730e-003	5.5830e-003
tblVehicleEF	LDT2	7.7350e-003	0.07

tblVehicleEF	LDT2	1.04	1.31
tblVehicleEF	LDT2	1.53	2.36
tblVehicleEF	LDT2	397.09	369.05
tblVehicleEF	LDT2	81.97	71.61
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
tblVehicleEF	LDT2	1.5980e-003	1.5480e-003
tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6510e-003
tblVehicleEF	LDT2	8.4600e-004	7.0900e-004
tblVehicleEF	LDT2	0.14	0.89
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tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8730e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.05

tblVehicleEF	LDT2	1.82	2.82
tblVehicleEF	LDT2	355.82	341.80
tblVehicleEF	LDT2	81.97	72.52
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
tblVehicleEF	LDT2	1.5980e-003	1.5480e-003
tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LDT2	3.5650e-003	3.3820e-003
tblVehicleEF	LDT2	8.5100e-004	7.1800e-004
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
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tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.6980e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43

tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.77	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.27
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
tblVehicleEF	LHD1	9.6600e-004	0.01
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tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
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tblVehicleEF	LHD1	2.5280e-003	2.4630e-003
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tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
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tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4470e-003
tblVehicleEF	LHD1	3.6200e-004	1.0200e-004
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tblVehicleEF	LHD1	0.11	0.08
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tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	2.43
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tblVehicleEF	LHD1	614.92	661.62
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tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.12	1.29
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tblVehicleEF	LHD1	9.6600e-004	0.01
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tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5280e-003	2.4630e-003
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tblVehicleEF	LHD1	7.5090e-003	0.08

tblVehicleEF	LHD1	0.13	0.09
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tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
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tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
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tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.7060e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
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tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
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tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.22	1.36

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tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.01	9.8530e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
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tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
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tblVehicleEF	LHD1	3.6100e-004	1.0200e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
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tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD2	3.8190e-003	0.05

tblVehicleEF	LHD2	5.2410e-003	4.4730e-003
tblVehicleEF	LHD2	9.1660e-003	9.5030e-003
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tblVehicleEF	LHD2	1.29	0.60
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tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
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tblVehicleEF	LHD2	2.6810e-003	2.6480e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1400e-004
tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
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tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
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tblVehicleEF	LHD2	5.3190e-003	4.5210e-003
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tblVehicleEF	LHD2	0.56	0.55
tblVehicleEF	LHD2	1.21	0.57
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.55
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tblVehicleEF	LHD2	0.12	1.49
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tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	2.6810e-003	2.6480e-003

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tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003
tblVehicleEF	LHD2	5.9810e-003	6.5320e-003
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tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2490e-003	4.4770e-003
tblVehicleEF	LHD2	9.0820e-003	9.4560e-003
tblVehicleEF	LHD2	0.12	1.91
tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.27	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54

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tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.67	1.47
tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	2.6810e-003	2.6480e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1400e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003
tblVehicleEF	LHD2	5.9810e-003	6.5320e-003
tblVehicleEF	LHD2	2.7200e-004	7.6000e-005
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07

tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.00	2.35
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	21.02	19.60
tblVehicleEF	MCY	9.91	8.58
tblVehicleEF	MCY	167.12	212.10
tblVehicleEF	MCY	46.87	61.05
tblVehicleEF	MCY	1.17	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
tblVehicleEF	MCY	3.5370e-003	2.8420e-003
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85
tblVehicleEF	MCY	2.0790e-003	2.0990e-003
tblVehicleEF	MCY	6.9500e-004	6.0400e-004
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88

tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
tblVehicleEF	MCY	46.87	59.22
tblVehicleEF	MCY	0.99	0.98
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
tblVehicleEF	MCY	3.5370e-003	2.8420e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	1.87	1.62
tblVehicleEF	MCY	2.0790e-003	2.0970e-003
tblVehicleEF	MCY	6.7100e-004	5.8600e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83

tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	2.03	1.77
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
tblVehicleEF	MCY	46.87	60.69
tblVehicleEF	MCY	1.13	1.10
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
tblVehicleEF	MCY	3.5370e-003	2.8420e-003
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0900e-003
tblVehicleEF	MCY	6.8600e-004	6.0100e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86

tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98
tblVehicleEF	MDV	0.01	6.4810e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.30
tblVehicleEF	MDV	3.59	3.43
tblVehicleEF	MDV	498.66	426.46
tblVehicleEF	MDV	110.76	89.63
tblVehicleEF	MDV	0.20	0.13
tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2170e-003
tblVehicleEF	MDV	1.1710e-003	8.8700e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51

tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MDV	0.02	7.2390e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.54
tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4570e-003
tblVehicleEF	MDV	1.1600e-003	8.7600e-004
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45

tblVehicleEF	MDV	0.01	6.3480e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.44
tblVehicleEF	MDV	488.33	421.93
tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1720e-003
tblVehicleEF	MDV	1.1700e-003	8.8700e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
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tblVehicleEF	MH	0.95	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.2000e-004	1.9100e-004
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.44	0.11

tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.74	1.58
tblVehicleEF	MH	6.31	2.05
tblVehicleEF	MH	1,048.28	1,507.73
tblVehicleEF	MH	59.91	19.00
tblVehicleEF	MH	1.50	1.42
tblVehicleEF	MH	0.90	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0900e-004	1.8800e-004
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59

tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.61	1.54
tblVehicleEF	MH	6.87	2.21
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tblVehicleEF	MH	0.94	0.23
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tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
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tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
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tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.1900e-004	1.9100e-004
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.17	0.10

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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1450e-003	5.9780e-003
tblVehicleEF	MHD	0.06	3.0950e-003
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tblVehicleEF	MHD	1,105.72	1,006.19
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tblVehicleEF	MHD	4.3700e-004	0.02
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	4.1800e-004	0.02
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	1.4330e-003	4.5970e-003
tblVehicleEF	MHD	0.05	7.3280e-003
tblVehicleEF	MHD	0.02	0.18
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tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02

tblVehicleEF	MHD	1.4910e-003	7.3950e-003
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tblVehicleEF	MHD	6.4400e-004	3.0000e-005
tblVehicleEF	MHD	1.4330e-003	4.5970e-003
tblVehicleEF	MHD	0.05	7.3280e-003
tblVehicleEF	MHD	0.03	0.23
tblVehicleEF	MHD	7.1400e-004	2.3840e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.40	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2290e-003	6.0070e-003
tblVehicleEF	MHD	0.05	2.9710e-003
tblVehicleEF	MHD	0.24	2.72
tblVehicleEF	MHD	0.32	0.52
tblVehicleEF	MHD	5.61	0.34
tblVehicleEF	MHD	164.29	793.74
tblVehicleEF	MHD	1,105.72	1,006.20
tblVehicleEF	MHD	53.92	2.96
tblVehicleEF	MHD	0.65	6.98
tblVehicleEF	MHD	1.01	2.18
tblVehicleEF	MHD	11.70	1.38
tblVehicleEF	MHD	3.6900e-004	0.02
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	3.5300e-004	0.02
tblVehicleEF	MHD	5.3330e-003	0.06

tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	2.8480e-003	8.4260e-003
tblVehicleEF	MHD	0.05	8.5070e-003
tblVehicleEF	MHD	0.02	0.17
tblVehicleEF	MHD	1.6690e-003	4.8010e-003
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	1.5770e-003	7.5180e-003
tblVehicleEF	MHD	0.01	9.5630e-003
tblVehicleEF	MHD	6.3800e-004	2.9000e-005
tblVehicleEF	MHD	2.8480e-003	8.4260e-003
tblVehicleEF	MHD	0.05	8.5070e-003
tblVehicleEF	MHD	0.03	0.22
tblVehicleEF	MHD	1.6690e-003	4.8010e-003
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tblVehicleEF	MHD	0.38	0.02
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tblVehicleEF	MHD	11.73	1.38
tblVehicleEF	MHD	5.3200e-004	0.03
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	5.0900e-004	0.03
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.4000e-005
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tblVehicleEF	MHD	0.03	0.19
tblVehicleEF	MHD	7.0500e-004	2.4390e-003
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02
tblVehicleEF	MHD	1.3710e-003	7.2250e-003
tblVehicleEF	MHD	0.01	9.5620e-003
tblVehicleEF	MHD	6.4300e-004	3.0000e-005
tblVehicleEF	MHD	1.5800e-003	4.8400e-003
tblVehicleEF	MHD	0.05	8.2350e-003
tblVehicleEF	MHD	0.04	0.24
tblVehicleEF	MHD	7.0500e-004	2.4390e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.39	0.02
tblVehicleEF	OBUS	0.01	0.13

tblVehicleEF	OBUS	0.01	8.8680e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	9.46
tblVehicleEF	OBUS	0.73	0.98
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tblVehicleEF	OBUS	1.97	0.99
tblVehicleEF	OBUS	1.1300e-004	0.04
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4500e-004
tblVehicleEF	OBUS	1.0800e-004	0.04
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	9.4600e-004	0.01
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.41	0.08
tblVehicleEF	OBUS	6.8200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2800e-004	1.3700e-004

tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	9.4600e-004	0.01
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tblVehicleEF	OBUS	1.92	0.99
tblVehicleEF	OBUS	9.5000e-005	0.03
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4500e-004
tblVehicleEF	OBUS	9.1000e-005	0.03
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02

tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	2.1830e-003	0.03
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.39	0.08
tblVehicleEF	OBUS	7.1200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1800e-004	1.3500e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	2.1830e-003	0.03
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.42	0.08
tblVehicleEF	OBUS	0.01	0.13
tblVehicleEF	OBUS	0.01	8.8720e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	10.12
tblVehicleEF	OBUS	0.73	0.98
tblVehicleEF	OBUS	6.62	1.68
tblVehicleEF	OBUS	65.88	1,542.13
tblVehicleEF	OBUS	1,126.32	1,439.48
tblVehicleEF	OBUS	71.08	13.85
tblVehicleEF	OBUS	0.31	9.95
tblVehicleEF	OBUS	1.08	1.61
tblVehicleEF	OBUS	1.96	0.99

tblVehicleEF	OBUS	1.3700e-004	0.05
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4500e-004
tblVehicleEF	OBUS	1.3100e-004	0.04
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
tblVehicleEF	OBUS	2.3980e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	9.5900e-004	0.02
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.41	0.08
tblVehicleEF	OBUS	6.4100e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2700e-004	1.3700e-004
tblVehicleEF	OBUS	2.3980e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	9.5900e-004	0.02
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.45	0.09
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3510e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.64	28.74

tblVehicleEF	SBUS	0.71	0.85
tblVehicleEF	SBUS	5.49	2.56
tblVehicleEF	SBUS	1,270.71	3,328.19
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.78
tblVehicleEF	SBUS	12.46	30.54
tblVehicleEF	SBUS	5.17	5.50
tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2800e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7630e-003	2.7030e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1800e-004
tblVehicleEF	SBUS	3.0740e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.3130e-003	7.4840e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4600e-004
tblVehicleEF	SBUS	3.0740e-003	0.02

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.3130e-003	7.4840e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.4940e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.48	28.38
tblVehicleEF	SBUS	0.72	0.87
tblVehicleEF	SBUS	3.76	1.85
tblVehicleEF	SBUS	1,335.64	3,405.36
tblVehicleEF	SBUS	1,144.20	1,125.93
tblVehicleEF	SBUS	36.06	13.61
tblVehicleEF	SBUS	12.86	31.23
tblVehicleEF	SBUS	4.84	5.16
tblVehicleEF	SBUS	15.20	0.76
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2800e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7630e-003	2.7030e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1800e-004
tblVehicleEF	SBUS	5.9210e-003	0.03

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.35
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.23	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	1.3500e-004
tblVehicleEF	SBUS	5.9210e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.96	4.83
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.25	0.10
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3430e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.85	29.24
tblVehicleEF	SBUS	0.71	0.85
tblVehicleEF	SBUS	5.54	2.67
tblVehicleEF	SBUS	1,181.05	3,221.61
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.98
tblVehicleEF	SBUS	11.91	29.59
tblVehicleEF	SBUS	5.09	5.42

tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2800e-004
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	2.7630e-003	2.7030e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1800e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.2980e-003	7.7230e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.29	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4800e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.2980e-003	7.7230e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.32	0.12
tblVehicleEF	UBUS	1.95	4.45

tblVehicleEF	UBUS	0.09	9.2990e-003
tblVehicleEF	UBUS	9.79	34.75
tblVehicleEF	UBUS	14.93	0.84
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.67
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	13.77	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
tblVehicleEF	UBUS	8.4220e-003	3.8760e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2710e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.19	0.03
tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.6230e-003	1.0600e-004
tblVehicleEF	UBUS	8.4220e-003	3.8760e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2710e-003
tblVehicleEF	UBUS	2.68	4.54

tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.30	0.04
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.08	8.4410e-003
tblVehicleEF	UBUS	9.90	34.75
tblVehicleEF	UBUS	12.23	0.71
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.47
tblVehicleEF	UBUS	5.98	0.38
tblVehicleEF	UBUS	13.65	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
tblVehicleEF	UBUS	0.02	7.1140e-003
tblVehicleEF	UBUS	0.15	8.7360e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	0.67	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.5760e-003	1.0400e-004
tblVehicleEF	UBUS	0.02	7.1140e-003

tblVehicleEF	UBUS	0.15	8.7360e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	2.69	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.16	0.03
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3770e-003
tblVehicleEF	UBUS	9.80	34.75
tblVehicleEF	UBUS	14.43	0.85
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.69
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	13.74	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
tblVehicleEF	UBUS	9.6690e-003	4.0000e-003
tblVehicleEF	UBUS	0.15	8.2160e-003
tblVehicleEF	UBUS	4.2700e-003	2.3060e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03

tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.6140e-003	1.0600e-004
tblVehicleEF	UBUS	9.6690e-003	4.0000e-003
tblVehicleEF	UBUS	0.15	8.2160e-003
tblVehicleEF	UBUS	4.2700e-003	2.3060e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	1.79
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	1.79
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	1.68	1.79

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5593	50.2712	32.6975	0.0758	18.2675	2.1987	20.4662	9.9840	2.0228	12.0069	0.0000	7,560.9261	7,560.9261	1.9485	0.0000	7,583.1341
2021	34.6535	41.8442	45.2959	0.1068	3.9777	1.7680	5.7457	1.0686	1.6540	2.7226	0.0000	10,577.3760	10,577.3760	1.6191	0.0000	10,617.8529
Maximum	**34.6535**	**50.2712**	**45.2959**	**0.1068**	**18.2675**	**2.1987**	**20.4662**	**9.9840**	**2.0228**	**12.0069**	**0.0000**	**10,577.3760**	**10,577.3760**	**1.9485**	**0.0000**	**10,617.8529**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.9339	12.9549	33.7384	0.0758	8.3153	0.1045	8.3787	4.5183	0.1029	4.5816	0.0000	7,560.9261	7,560.9261	1.9485	0.0000	7,583.1341
2021	31.9162	13.5451	48.8383	0.1068	3.6750	0.1197	3.7947	0.9943	0.1173	1.1116	0.0000	10,577.3760	10,577.3760	1.6191	0.0000	10,617.8529
Maximum	**31.9162**	**13.5451**	**48.8383**	**0.1068**	**8.3153**	**0.1197**	**8.3787**	**4.5183**	**0.1173**	**4.5816**	**0.0000**	**10,577.3760**	**10,577.3760**	**1.9485**	**0.0000**	**10,617.8529**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**13.68**	**71.23**	**-5.88**	**0.00**	**46.10**	**94.35**	**53.56**	**50.12**	**94.01**	**61.35**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Energy	0.0204	0.1854	0.1558	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.5244	222.5244	4.2700e-003	4.0800e-003	223.8467
Mobile	3.4953	27.6238	34.1674	0.1263	8.0307	0.2787	8.3094	2.1629	0.2695	2.4324		13,354.9454	13,354.9454	0.6489		13,371.1689
Offroad	0.2587	2.3583	2.3357	3.0600e-003		0.1674	0.1674		0.1540	0.1540		296.0617	296.0617	0.0958		298.4555
Total	**10.8957**	**30.1680**	**36.7191**	**0.1305**	**8.0307**	**0.4604**	**8.4911**	**2.1629**	**0.4378**	**2.6008**		**13,873.6602**	**13,873.6602**	**0.7493**	**4.0800e-003**	**13,893.6083**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Energy	0.0144	0.1306	0.1097	7.8000e-004		9.9200e-003	9.9200e-003		9.9200e-003	9.9200e-003		156.7040	156.7040	3.0000e-003	2.8700e-003	157.6353
Mobile	3.4824	27.4390	33.9211	0.1251	7.9404	0.2758	8.2162	2.1386	0.2667	2.4054		13,225.8843	13,225.8843	0.6431		13,241.9615
Offroad	0.2587	2.3583	2.3357	3.0600e-003		0.1674	0.1674		0.1540	0.1540		296.0617	296.0617	0.0958		298.4555
Total	**10.8767**	**29.9284**	**36.4268**	**0.1289**	**7.9404**	**0.4533**	**8.3937**	**2.1386**	**0.4309**	**2.5695**		**13,678.7787**	**13,678.7787**	**0.7422**	**2.8700e-003**	**13,698.1895**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.17**	**0.79**	**0.80**	**1.19**	**1.12**	**1.54**	**1.15**	**1.12**	**1.59**	**1.20**	**0.00**	**1.40**	**1.40**	**0.95**	**29.66**	**1.41**

3.0 Construction Detail

Construction Phase

Sierra and Casa Grande 5/27/2020 - San Bernardino-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2020	6/12/2020	5	10	
2	Grading	Grading	6/13/2020	7/24/2020	5	30	
3	Building Construction	Building Construction	7/25/2020	9/17/2021	5	300	
4	Paving	Paving	6/18/2021	9/1/2021	5	54	
5	Architectural Coating	Architectural Coating	6/18/2021	9/1/2021	5	54	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 499,494; Non-Residential Outdoor: 166,498; Striped Parking Area: 14,349 (Architectural Coating – sqft)

OffRoad Equipment

Sierra and Casa Grande 5/27/2020 - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	239.00	94.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0983	0.0663	0.6653	1.8300e-003	0.2012	1.3200e-003	0.2025	0.0534	1.2100e-003	0.0546		182.4750	182.4750	5.4500e-003		182.6112
Total	**0.0983**	**0.0663**	**0.6653**	**1.8300e-003**	**0.2012**	**1.3200e-003**	**0.2025**	**0.0534**	**1.2100e-003**	**0.0546**		**182.4750**	**182.4750**	**5.4500e-003**		**182.6112**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**8.1298**	**0.0621**	**8.1919**	**4.4688**	**0.0621**	**4.5309**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0983	0.0663	0.6653	1.8300e-003	0.1855	1.3200e-003	0.1868	0.0495	1.2100e-003	0.0507		182.4750	182.4750	5.4500e-003		182.6112
Total	**0.0983**	**0.0663**	**0.6653**	**1.8300e-003**	**0.1855**	**1.3200e-003**	**0.1868**	**0.0495**	**1.2100e-003**	**0.0507**		**182.4750**	**182.4750**	**5.4500e-003**		**182.6112**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1092	0.0737	0.7393	2.0400e-003	0.2236	1.4600e-003	0.2250	0.0593	1.3500e-003	0.0606		202.7500	202.7500	6.0500e-003		202.9013
Total	**0.1092**	**0.0737**	**0.7393**	**2.0400e-003**	**0.2236**	**1.4600e-003**	**0.2250**	**0.0593**	**1.3500e-003**	**0.0606**		**202.7500**	**202.7500**	**6.0500e-003**		**202.9013**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**3.9030**	**0.1015**	**4.0045**	**1.6184**	**0.1015**	**1.7200**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1092	0.0737	0.7393	2.0400e-003	0.2061	1.4600e-003	0.2075	0.0550	1.3500e-003	0.0563		202.7500	202.7500	6.0500e-003		202.9013
Total	**0.1092**	**0.0737**	**0.7393**	**2.0400e-003**	**0.2061**	**1.4600e-003**	**0.2075**	**0.0550**	**1.3500e-003**	**0.0563**		**202.7500**	**202.7500**	**6.0500e-003**		**202.9013**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3010	9.8393	2.2406	0.0245	0.6021	0.0462	0.6483	0.1734	0.0442	0.2176		2,585.0010	2,585.0010	0.1931		2,589.8294
Worker	1.3051	0.8809	8.8340	0.0243	2.6715	0.0175	2.6890	0.7085	0.0161	0.7246		2,422.8620	2,422.8620	0.0723		2,424.6702
Total	**1.6061**	**10.7202**	**11.0746**	**0.0489**	**3.2735**	**0.0637**	**3.3372**	**0.8818**	**0.0603**	**0.9422**		**5,007.8630**	**5,007.8630**	**0.2655**		**5,014.4996**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3010	9.8393	2.2406	0.0245	0.5635	0.0462	0.6097	0.1639	0.0442	0.2081		2,585.0010	2,585.0010	0.1931		2,589.8294
Worker	1.3051	0.8809	8.8340	0.0243	2.4624	0.0175	2.4799	0.6572	0.0161	0.6733		2,422.8620	2,422.8620	0.0723		2,424.6702
Total	**1.6061**	**10.7202**	**11.0746**	**0.0489**	**3.0259**	**0.0637**	**3.0896**	**0.8211**	**0.0603**	**0.8814**		**5,007.8630**	**5,007.8630**	**0.2655**		**5,014.4996**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2580	8.9686	1.9953	0.0244	0.6020	0.0160	0.6180	0.1734	0.0153	0.1886		2,571.2302	2,571.2302	0.1874		2,575.9148
Worker	1.2170	0.7895	8.1154	0.0236	2.6715	0.0171	2.6885	0.7085	0.0157	0.7242		2,345.7794	2,345.7794	0.0653		2,347.4118
Total	**1.4751**	**9.7581**	**10.1107**	**0.0479**	**3.2735**	**0.0331**	**3.3066**	**0.8818**	**0.0310**	**0.9129**		**4,917.0097**	**4,917.0097**	**0.2527**		**4,923.3266**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2580	8.9686	1.9953	0.0244	0.5635	0.0160	0.5794	0.1639	0.0153	0.1792		2,571.2302	2,571.2302	0.1874		2,575.9148
Worker	1.2170	0.7895	8.1154	0.0236	2.4624	0.0171	2.4795	0.6572	0.0157	0.6729		2,345.7794	2,345.7794	0.0653		2,347.4118
Total	**1.4751**	**9.7581**	**10.1107**	**0.0479**	**3.0259**	**0.0331**	**3.0590**	**0.8211**	**0.0310**	**0.8521**		**4,917.0097**	**4,917.0097**	**0.2527**		**4,923.3266**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.2843					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5399**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.2843					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5648**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1546	1.0700e-003	0.1556	0.0413	9.9000e-004	0.0422		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1546**	**1.0700e-003**	**0.1556**	**0.0413**	**9.9000e-004**	**0.0422**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.1980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**29.4169**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2444	0.1586	1.6299	4.7300e-003	0.5365	3.4300e-003	0.5400	0.1423	3.1600e-003	0.1455		471.1189	471.1189	0.0131		471.4467
Total	**0.2444**	**0.1586**	**1.6299**	**4.7300e-003**	**0.5365**	**3.4300e-003**	**0.5400**	**0.1423**	**3.1600e-003**	**0.1455**		**471.1189**	**471.1189**	**0.0131**		**471.4467**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.1980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**29.2277**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2444	0.1586	1.6299	4.7300e-003	0.4946	3.4300e-003	0.4980	0.1320	3.1600e-003	0.1352		471.1189	471.1189	0.0131		471.4467
Total	**0.2444**	**0.1586**	**1.6299**	**4.7300e-003**	**0.4946**	**3.4300e-003**	**0.4980**	**0.1320**	**3.1600e-003**	**0.1352**		**471.1189**	**471.1189**	**0.0131**		**471.4467**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Implement Trip Reduction Program

Employee Vanpool/Shuttle

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4824	27.4390	33.9211	0.1251	7.9404	0.2758	8.2162	2.1386	0.2667	2.4054		13,225.8843	13,225.8843	0.6431		13,241.9615
Unmitigated	3.4953	27.6238	34.1674	0.1263	8.0307	0.2787	8.3094	2.1629	0.2695	2.4324		13,354.9454	13,354.9454	0.6489		13,371.1689

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	579.01	579.01	579.01	3,704,926	3,663,269
Total	579.01	579.01	579.01	3,704,926	3,663,269

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Unrefrigerated Warehouse-No Rail	0.436242	0.037123	0.179649	0.119457	0.017229	0.034600	0.046400	0.123300	0.000000	0.000000	0.006000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0144	0.1306	0.1097	7.8000e-004		9.9200e-003	9.9200e-003		9.9200e-003	9.9200e-003		156.7040	156.7040	3.0000e-003	2.8700e-003	157.6353
NaturalGas Unmitigated	0.0204	0.1854	0.1558	1.1100e-003		0.0141	0.0141		0.0141	0.0141		222.5244	222.5244	4.2700e-003	4.0800e-003	223.8467

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	95.0685	1.0300e-003	9.3200e-003	7.8300e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004		11.1845	11.1845	2.1000e-004	2.1000e-004	11.2510
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1796.39	0.0194	0.1761	0.1479	1.0600e-003		0.0134	0.0134		0.0134	0.0134		211.3399	211.3399	4.0500e-003	3.8700e-003	212.5957
Total		**0.0204**	**0.1854**	**0.1558**	**1.1200e-003**		**0.0141**	**0.0141**		**0.0141**	**0.0141**		**222.5244**	**222.5244**	**4.2600e-003**	**4.0800e-003**	**223.8467**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0665479	7.2000e-004	6.5200e-003	5.4800e-003	4.0000e-005		5.0000e-004	5.0000e-004		5.0000e-004	5.0000e-004		7.8292	7.8292	1.5000e-004	1.4000e-004	7.8757
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.26544	0.0137	0.1241	0.1042	7.4000e-004		9.4300e-003	9.4300e-003		9.4300e-003	9.4300e-003		148.8749	148.8749	2.8500e-003	2.7300e-003	149.7596
Total		**0.0144**	**0.1306**	**0.1097**	**7.8000e-004**		**9.9300e-003**	**9.9300e-003**		**9.9300e-003**	**9.9300e-003**		**156.7040**	**156.7040**	**3.0000e-003**	**2.8700e-003**	**157.6353**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Unmitigated	7.1213	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.6837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.6300e-003	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Total	**7.1213**	**5.5000e-004**	**0.0603**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1287**	**0.1287**	**3.4000e-004**		**0.1373**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4320					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.6837					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.6300e-003	5.5000e-004	0.0603	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1287	0.1287	3.4000e-004		0.1373
Total	**7.1213**	**5.5000e-004**	**0.0603**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1287**	**0.1287**	**3.4000e-004**		**0.1373**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	8.00	260	89	0.20	Electrical

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.2587	2.3583	2.3357	3.0600e-003		0.1674	0.1674		0.1540	0.1540		296.0617	296.0617	0.0958		298.4555
Total	**0.2587**	**2.3583**	**2.3357**	**3.0600e-003**		**0.1674**	**0.1674**		**0.1540**	**0.1540**		**296.0617**	**296.0617**	**0.0958**		**298.4555**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Greenhouse Gas Emissions Assessment
Sierra Avenue and Casa Grande Warehouse Project
City of Fontana, California

Kimley»Horn
Expect More. Experience Better.

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APPENDIX
Appendix A: Greenhouse Gas Emissions Data

LIST OF ABBREVIATED TERMS

AB	Assembly Bill
CARB	California Air Resource Board
CCR	California Code of Regulations
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CALGreen Code	California Green Building Standards Code
CPUC	California Public Utilities Commission
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CFC	Chlorofluorocarbon
CPP	Clean Power Plan
CCSP	Climate Change Scoping Plan
cy	cubic yard
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
GHG	greenhouse gas
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
LCFS	Low Carbon Fuel Standard
CH_4	Methane
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
$MTCO_2e$	million tons of carbon dioxide equivalent
NHTSA	National Highway Traffic Safety Administration
NF_3	nitrogen trifluoride
N_2O	nitrous oxide
PFC	Perfluorocarbon
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCAG	Southern California Association of Government
Sf	square foot
SF_6	sulfur hexafluoride
TAC	toxic air contaminants

1 INTRODUCTION

This report documents the results of a Greenhouse Gas (GHG) Emissions Assessment completed for the Sierra Avenue and Casa Grande Warehouse Project ("Project" or "Proposed Project"). The purpose of this GHG Emissions Assessment is to evaluate the potential construction and operational emissions associated with the Project and determine the level of impact the Project would have on the environment.

1.1 PROJECT LOCATION AND SETTING

The propose warehouse site is located in the northeastern portion of the City of Fontana (City); approximately 330 feet west of the City border as shown in Exhibit 1: *Regional Vicinity*. The warehouse site consists of three connected parcels on the northeast corner of the Sierra Avenue and Casa Grande Drive intersection; refer to Exhibit 2: *Local Vicinity*. Regional access would be available to the site via transportation routes including State Route 210 and Interstate Highway I-15. The State Route 210 entrance and exit is located approximately 1.5 miles south of the proposed Project via Sierra Avenue. The Interstate Highway I-15 entrance and exit is located approximately 1.6 miles north of the proposed Project via Sierra Avenue.

The warehouse site is a rectangular lot, mostly vacant, and unimproved site on approximately 16.5-gross acres (15.34-net acres) or approximately 661,561-square feet; refer to Exhibit 2**.** The northwest corner of the property is occupied by a single-family residence, while the remaining portion of the property is undeveloped land covered with natural vegetation, including two trees on the west side of the site. A concrete foundation from a former house remains on the site. Additionally, there is debris consisting of mostly rocks, dirt, tires, and an old domestic sprinkler hose. The property is zoned R-5 and R-MU for single-family residential and regional-mixed use commercial development by the City of Fontana, respectively.

1.2 PROJECT DESCRIPTION

The proposed Project involves the development of a 332,996-square feet distribution warehouse building within the approximate 16.5-gross acre (15.34-net acre) warehouse site. The warehouse would have associated facilities and improvements such as a guard booth, mezzanine (5,000-square feet), vehicle parking, loading dock doors, trailer parking, onsite and off-site landscaping, and onsite and off-site improvements; Refer to Exhibit 3**:** *Conceptual Site Plan*.

Landscaping

Onsite landscaping would be provided on the Project site. Approximately twenty-five to sixty-foot-wide landscaped buffers would be provided along the south and west boundaries and a thirty-foot-wide buffer along the northern boundary.

Project Circulation

Regional Project access would be from Interstate 215 (I-215) and State Route 210 (SR-210) via the officially designated local truck route[1] Sierra Avenue. Local access would be provided via Casa Grande Drive. Project

[1] City of Fontana, *Local Truck Route – Ordinance No. 1273*, https://www.fontana.org/DocumentCenter/View/3971/Local-Truck-Routes-2017-11x17?bidId=, accessed March 11, 2020.

site ingress and egress would be via four driveways; two approximately thirty-foot driveways on Sierra Avenue and two approximately forty-foot driveways on Casa Grande Drive.

Parking

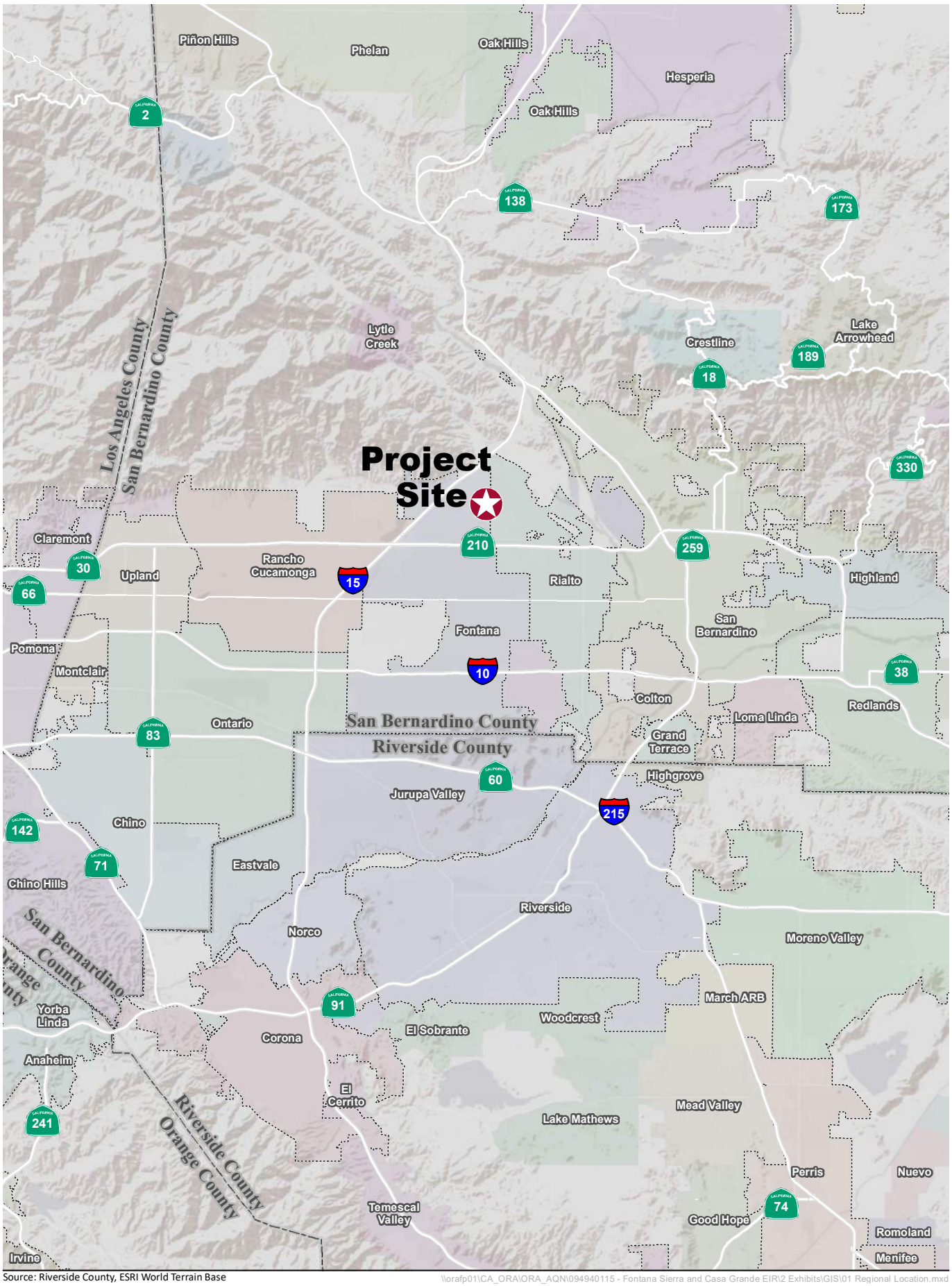
The Project would provide 134 parking stalls, 67 trailers stalls, and 35 dock doors.

Project Phasing and Construction

The Project is anticipated to be developed in one phase. Should the Project be approved, construction is anticipated to occur over a duration of approximately 15 months, commencing in the second half of 2020; the facility would be operational in late 2021.

Offsite Improvements

The Project will be responsible for approximately eighteen feet beyond the property line on Casa Grande Drive. Additionally, the Project would improve Sierra Avenue and Casa Grande Drive with approved curb, gutter, and lighting.



Source: Riverside County, ESRI World Terrain Base

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EXHIBIT 1: Regional Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 2.5 5

Miles

Kimley»Horn



Source: ESRI World Imagery

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\02 Site Vicinity.mxd

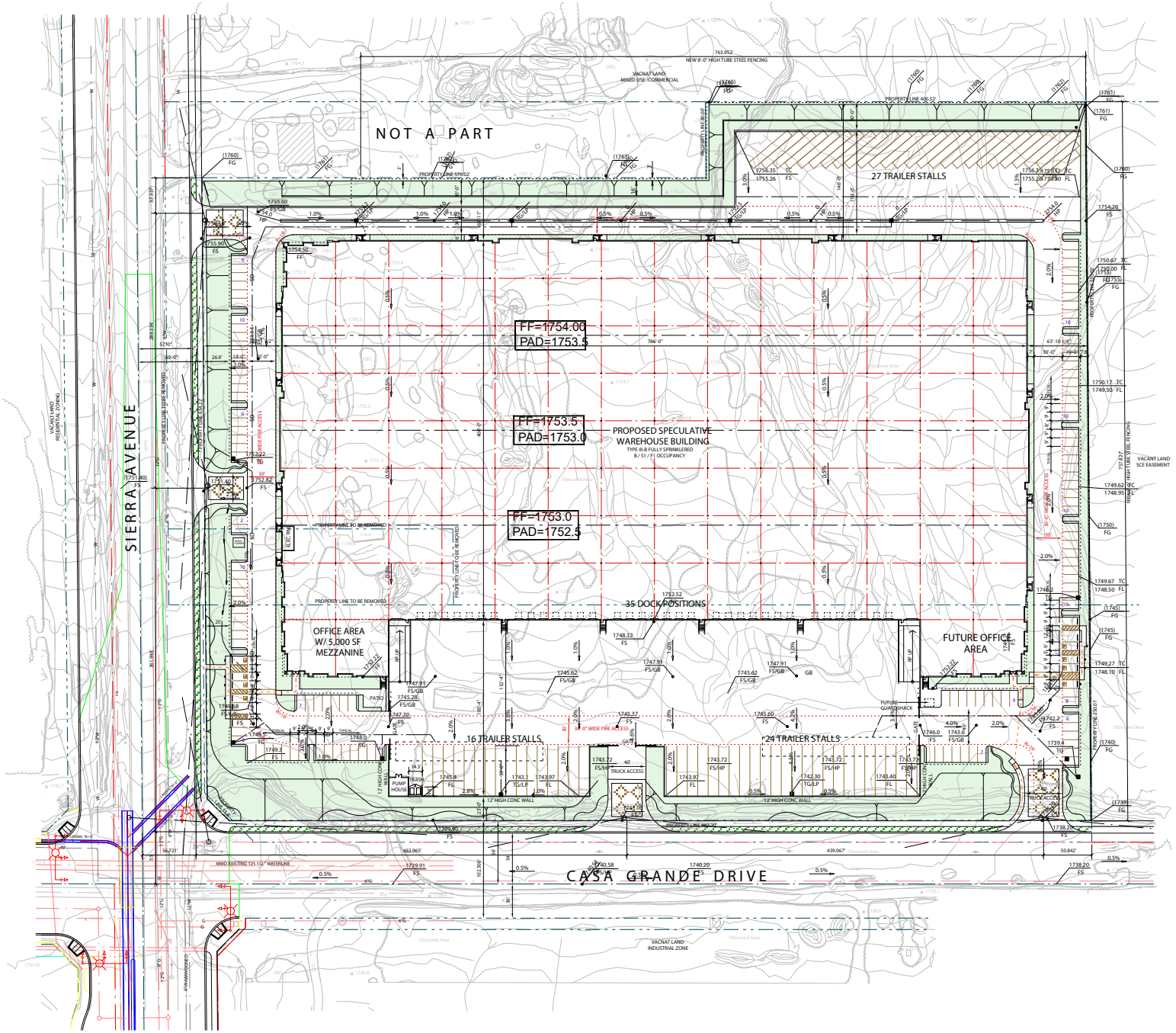
EXHIBIT 2: Site Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 250 500

Feet

Kimley»Horn



Source: RGA Office of Architectural Design

EXHIBIT 3: Conceptual Site Plan

Sierra Avenue and Casa Grande Warehouse Project

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Not to Scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 GREENHOUSE GASES AND CLIMATE CHANGE

Certain gases in the earth's atmosphere classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere.[3] Table 1: Description of Greenhouse Gases describes the primary GHGs attributed to global climate change, including their physical properties.

[3] Intergovernmental Panel on Climate Change, *Carbon and Other Biogeochemical Cycles. In: Climate Change 2013: The Physical Science Basis*, *Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013. http://www.climatechange2013.org/ images/report/WG1AR5_ALL_FINAL.pdf.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen Trifluoride (NF_3)	NF_3 was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, *Overview of Greenhouse Gases*, April 11, 2018 (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

3 REGULATORY SETTING

3.1 FEDERAL

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks. It should be noted that the U.S. EPA is currently proposing to freeze the vehicle fuel efficiency standards at their planned 2020 level (37 mpg), canceling any future strengthening (currently 54.5 mpg by 2026).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 Federal Register [FR] 64510–64660), also known as the Clean Power Plan (CPP). These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: one fossil-fuel-fired electric utility steam-generating unit and two stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the CPP pending resolution of several lawsuits. Additionally, in March 2017, the federal government directed the EPA Administrator to review the CPP to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13783

Presidential Executive Order 13783, *Promoting Energy Independence and Economic Growth* issued on March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of CO_2, N_2O, and CH_4.

3.2 STATE OF CALIFORNIA

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 459 million gross metric tons of CO_2e in 2013. In the State, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan

CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual").[4] The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the State's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines

[4] CARB defines business-as-usual (BAU) in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

the adopted role of a cap-and-trade program.[5] Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.
- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated in light of current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 million metric tons of CO_2e ($MMTCO_2e$) to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated State-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32.

In 2016, the Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017 CARB adopted a

[5] The Climate Action Team, led by the secretary of the California Environmental Protection Agency, is a group of State agency secretaries and heads of agencies, boards, and departments. Team members work to coordinate statewide efforts to implement global warming emissions reduction programs and the State's Climate Adaptation Strategy.

second update to the Scoping Plan.[6] The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and, support the Clean Power Plan and other Federal actions.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit)

Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards)

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.

SB 1368 (Emission Performance Standards)

SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

[6] California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed March 12, 2020.

SB 1078 and SBX1-2 (Renewable Electricity Standards)

SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, which codified the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015)

Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

AB 398 (Market-Based Compliance Mechanisms)

Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

SB 150 (Regional Transportation Plans)

Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e., 40 percent below their 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

SB 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases)

Signed into Law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05

Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07

Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08

Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08

Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09

Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's RPS to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program,

requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15

Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e (MMTCO2e). The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

Executive Order B-55-18.

Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations

The appliance efficiency regulations (California Code of Regulations [CCR] Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6), was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2016 Building Energy Efficiency Standards approved on January 19, 2016 went into effect on January 1, 2017. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and went into effect on January 1, 2020. Under the 2019 standards, homes will use about 53 percent less energy and nonresidential buildings will use about 30 percent less energy than buildings under the 2016 standards.

Title 24 California Green Building Standards Code

The California Green Building Standards Code (CCR Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2017. Updates to the 2016 CALGreen Code took take effect on January 1, 2020 (2019 CALGreen). The 2019 CALGreen standards will continue to improve upon the existing standards for new construction of, and additions and alterations to, residential and nonresidential buildings.

3.3 REGIONAL

South Coast Air Quality Management District Thresholds

The South Coast Air Quality Management District (SCAQMD) formed a GHG California Environmental Quality Act (CEQA) Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.

With the tiered approach, the Project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all industrial projects, the SCAQMD is proposing a screening threshold of 10,000 million tons of CO_2e ($MTCO_2e$) per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, SCAQMD initially outlined that a project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third option. Under the Tier 4 third option, a project would be excluded if it was below an efficiency-based threshold of 4.8 $MTCO_2e$ per service population per year. Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

GHG efficiency metrics are utilized as thresholds to assess the GHG efficiency of a project on a per capita basis or on a service population basis (the sum of the number of jobs and the number of residents provided by a project) such that a project would allow for consistency with the goals of AB 32 (i.e. 1990 GHG emissions levels by 2020 and 2035). GHG efficiency thresholds can be determined by dividing the GHG emissions inventory goal of the State, by the estimated 2035 population and employment. This method allows highly efficient projects with higher mass emissions to meet the overall reduction goals of

AB 32, and is appropriate, because the threshold can be applied evenly to all project types (residential or commercial/retail only and mixed use).

Although the screening threshold for industrial projects is 10,000 $MTCO_2e$ per year, the City of Fontana utilizes 3,000 $MTCO_2e$ per year as the GHG threshold for warehouse projects. Therefore, the City of Fontana's GHG threshold of 3,000 $MTCO_2e$ per year will be the threshold utilized to evaluate GHG emissions from the proposed warehouse project.

Southern California Association of Governments

On April 7, 2016, the Southern California Association of Governments (SCAG) Regional Council adopted the *2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy* (RTP/SCS). The RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The strategy was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The RTP/SCS is a long-range vision plan that balances future mobility and housing needs with economic, environmental, and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions.

3.4 LOCAL

City of Fontana General Plan

The City of Fontana's General Plan outlines the concerns of the community and the means of addressing those concerns. Chapter 9, Community Mobility and Circulation focuses on connecting neighborhoods and city destinations by expanding transportation choices in Fontana. General Plan policies that relate to greenhouse gas impacts include the following:

Goal 7: The City of Fontana participates in shaping regional transportation policies to reduce traffic congestion and greenhouse gas emissions

Policy 7-3: Participate in the efforts of the Southern California Association of Governments (SCAG) to coordinate transportation planning and services that support greenhouse gas reduction.

San Bernardino County Regional Greenhouse Gas Reduction Plan

In response to statewide GHG reduction initiatives, the San Bernardino Associated Governments (formerly SANBAG, now known as SBCOG), cooperated to compile an inventory of GHG emissions and an evaluation of reduction measures to be adopted by the cities partnering within SBCOG. Reduction measures in the GHG Reduction Plan (GHGRP) are targeting GHG goals for the year 2020. Several of the measures and policies mentioned in the GHGRP for the City of Fontana are from the General Plan. The policies listed in the GHGRP range from broadly supporting energy efficiency and sustainability to policies closely tied to specific GHG reduction measures. Application of these policies is expected to reduce local GHGs by an

estimated 387,998 $MTCO_2e$ from "business as usual" levels in 2020. This would equate to a 28.0 percent reduction in GHGs from the 2008 levels of 1,238,926 $MTCO_2e$ annually.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 THRESHOLDS AND SIGNIFICANT CRITERIA

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions[7].

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

South Coast Air Quality Management District Thresholds

The SCAQMD has not announced when staff is expecting to present a finalized version of its GHG thresholds to the governing board. On September 28, 2010, the SCAQMD recommended an interim screening level numeric "bright-line" threshold of 10,000 metric tons per year of CO_2e for industrial land uses. These efficiency-based thresholds were developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. This working group was formed to assist SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State Office of Planning and Research, CARB, the Attorney General's Office, a variety of city and county planning departments in the SCAB, various utilities such as sanitation and power companies throughout the SCAB, industry groups, and environmental and professional organizations. The numeric "bright line" was developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provides guidance to CEQA practitioners in determining whether GHG emissions from a proposed project are significant.

4.2 METHODOLOGY

The Project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod). Details of the modeling assumptions and emission factors are provided in Appendix A: Greenhouse Gas Emissions Data. For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The Project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The

[7] 14 California Code of Regulations, Section 15064.4a

Project's operations-related GHG emissions would be generated by vehicular traffic, area sources (e.g. landscaping maintenance, consumer products), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 GREENHOUSE GAS EMISSIONS

Threshold 5.1 Would the Project generate GHG emissions, either directly or indirectly, that could have a significant impact on the environment?

Short-Term Construction Greenhouse Gas Emissions

The Project would result in direct emissions of GHGs from construction. The approximate quantity of daily GHG emissions generated by construction equipment utilized to build the Project is depicted in Table 2: Construction-Related Greenhouse Gas Emissions.

Table 2: Construction-Related Greenhouse Gas Emissions

Category	$MTCO_2e$
2020 Construction	501
2021 Construction	718
Total Construction Emissions	1,219
30-Year Amortized Construction	41

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

As shown, the Project would result in the generation of approximately 1,219 $MTCO_2e$ over the course of construction. Construction GHG emissions are typically summed and amortized over the lifetime of the Project (assumed to be 30 years), then added to the operational emissions.[8] The amortized Project construction emissions would be 41 $MTCO_2e$ per year. Once construction is complete, the generation of these GHG emissions would cease.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions occur over the life of the Project. GHG emissions would result from direct emissions such as Project generated vehicular traffic, on-site combustion of natural gas, and operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the Project, the emissions associated with solid waste generated from the Project, and any fugitive refrigerants from air conditioning or refrigerators.

Total GHG emissions associated with the Project are summarized in Table 3: Project Greenhouse Gas Emissions. As shown in Table 3, the Project would generate approximately 2,857 $MTCO_2e$ annually from both construction and operations and the Project. Project-related GHG emissions would not exceed the City's 3,000 $MTCO_2e$ per year threshold. Therefore, the proposed Project would be less than significant, and no mitigation measures are required.

[8] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 3: Project Greenhouse Gas Emissions	
Emissions Source	**$MTCO_2e$ per Year**
Construction Amortized Over 30 Years	41
Area Source	0
Energy	235
Mobile	2,196
Off-road	35
Waste	79
Water and Wastewater	271
Total	**2,857**
City of Fontana Project Threshold	*3,000*
Exceeds Threshold?	**No**
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.	

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

5.2 GREENHOUSE GAS REDUCTION PLAN COMPLIANCE

Threshold 5.2 Would the Project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions?

San Bernardino County Regional Greenhouse Gas Reduction Plan Consistency

The City follows the 2014 GHGRP, which serves as a long-term vision for how Fontana, along with neighboring cities, can be more environmentally friendly and provides guidance for residents, City staff, and decision makers in the community on how to achieve future sustainability goals. The goals outlined in the GHGRP target GHG emissions in the year 2020. As shown in Table 4: San Bernardino County Regional Greenhouse Gas Reduction Plan Consistency, the Project would not conflict with the goals in the GHGRP.

Table 4: San Bernardino County Regional Greenhouse Gas Reduction Plan Consistency			
SBCOG Goals		**Compliance**	
GOAL 1:	Continue to support the regional bus system to provide intra-city service, inter-city service to major employment centers, and connect with other regional transportation transfer points.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 2:	Where needed and appropriate, require new development to provide transit facilities and accommodations, such as bus shelters and turnouts, consistent with regional agency plans and existing and anticipated demands.	Consistent:	The Project is not located immediately adjacent to an existing bus route. Therefore, the new development would not need to provide transit facilities and accommodations for buses.

Table 4: San Bernardino County Regional Greenhouse Gas Reduction Plan Consistency			
SBCOG Goals		**Compliance**	
GOAL 3:	Continue to implement traffic signal systems and intelligent transportation systems (ITS) components (not limited to signal coordination, highway advisory radio, closed circuit television, emergency vehicle signal preemption, etc.) along arterial roadways and sub-areas, in accordance to the City's traffic Signal System Conceptual Buildout Plan and in compliance with regional and appropriate ITS Architecture Master Plans	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 4:	Continue to develop non-motorized trails and bicycle routes as identified in the City's adopted General Plan; Parks, Recreation and Trails Element and the adopted Regional Non-Motorized Transportation Plan.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 5:	Require that all new development adjacent to non-motorized trails provide bicycle and pedestrian routes linked to those facilities.	N/A:	The Project site is not located near non-motorized trails and therefore is not applicable.
GOAL 6:	Increase densities through transit-oriented development in the core of the city adjacent to the Metrolink and Omni-trans hub.	N/A:	The Project is not located near the City core and/or a Metrolink or Moni-trans hub. In addition, the Project consists of a warehouse development and is not considered a transit-oriented development.
GOAL 7:	Activity Centers should be linked with residential neighborhoods and be accessible by multiple modes of transportation.	N/A:	This is not a project-specific policy and is therefore not applicable.
Source: San Bernardino County Transportation Authority, *San Bernardino County Regional Greenhouse Gas Reduction Plan*, March 2014.			

SCAG RTP/SCS Consistency

On April 7, 2016, the Southern California Association of Governments (SCAG) Regional Council adopted the *2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy* (RTP/SCS). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG's RTP/SCS establishes GHG emissions goals for automobiles and light-duty trucks for 2020 and 2035 as well as an overall GHG target for the Project region consistent with both the target date of AB 32 and the post-2020 GHG reduction goals of Executive Orders 5-03-05 and B-30-15.

The RTP/SCS contains over 4,000 transportation projects, ranging from highway improvements, railroad grade separations, bicycle lanes, new transit hubs and replacement bridges. These future investments were included in county plans developed by the six county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices for everyone. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding.

The plan accounts for operations and maintenance costs to ensure reliability, longevity, and cost effectiveness. The RTP/SCS is also supported by a combination of transportation and land use strategies that help the region achieve state GHG emissions reduction goals and Federal Clean Air Act (FCAA) requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry, and utilize resources more efficiently. GHG emissions resulting from development-related mobile sources are the most potent source of emissions, and therefore Project comparison to the RTP/SCS is an appropriate indicator of whether the Project would inhibit the post-2020 GHG reduction goals promulgated by the state. The Project's consistency with the RTP/SCS goals is analyzed in detail in Table 5: Regional Transportation Plan/Sustainable Communities Strategy Consistency.

Table 5: Regional Transportation Plan/Sustainable Communities Strategy Consistency

SCAG Goals		Compliance	
GOAL 1:	Align the plan investments and policies with improving regional economic development and competitiveness.	N/A:	This is not a project-specific policy and is therefore not applicable.
GOAL 2:	Maximize mobility and accessibility for all people and goods in the region.	Consistent:	Although this Project is not a transportation improvement project, improvements to Sierra Avenue and Casa Grande Avenue are planned as a part of the Project to improve the mobility and accessibility of the area.
GOAL 3:	Ensure travel safety and reliability for all people and goods in the region.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 4:	Preserve and ensure a sustainable regional transportation system.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 5:	Maximize the productivity of our transportation system.	N/A:	This is not a transportation improvement project and is therefore not applicable.
GOAL 6:	Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g. bicycling and walking).	N/A:	This is not a project-specific policy. However, the Project would not exceed any air quality thresholds and is adjacent to proposed Class I and Class II bicycle facilities along Sierra Avenue and Casa Grande Avenue.
GOAL 7:	Actively encourage and create incentives for energy efficiency, where possible.	N/A:	This is not a project-specific policy and is therefore not applicable. However, the Project is required to comply with the provisions of the California Building Energy Efficiency Standards and the Green Building Standards Code (CALGreen).
GOAL 8:	Encourage land use and growth patterns that facilitate transit as well as non-motorized transportation.	Consistent:	The Project is located within approximately 1.5 miles of local bus routes.
GOAL 9:	Maximize security of transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	N/A:	This is not a transportation improvement project and is therefore not applicable.

Source: Southern California Association of Governments, *Regional Transportation Plan/Sustainable Communities Strategy*, 2016.

The goals stated in the RTP/SCS were used to determine consistency with the planning efforts previously stated. As shown in Table 5, the proposed Project would be consistent with the stated goals of the

RTP/SCS. Therefore, the proposed Project would not result in any significant impacts or interfere with SCAG's ability to achieve the region's post-2020 mobile source GHG reduction targets.

Consistency with the CARB Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (CO_2, CH_4, NO_X, HFCs, PFCs, and SF_6) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, CARB adopted the *Climate Change Scoping Plan* (CCSP) in 2008, which outlines actions recommended to obtain that goal. The CCSP provides a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as the cap-and-trade program, and an AB 32 implementation fee to fund the program. The 2017 CCSP Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the first update to the CCSP in 2013. Although a number of these measures are currently established as policies and measures, some measures have not yet been formally proposed or adopted. It is expected that these actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets.

As shown in Table 6: Project Consistency with Applicable CARB Scoping Plan Measures, the Project is consistent with most of the strategies, while others are not applicable to the Project. As such, impacts related to consistency with the Scoping Plan would be less than significant.

Table 6: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on GHG Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
	California Light-Duty Vehicle GHG Standards	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles	**Consistent**. This measure applies to all new vehicles starting with model year 2012. The Project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the Project would be required to comply with the Pavley emissions standards.
		2012 LEV III California GHG and Criteria Pollutant Exhaust and	**Consistent.** The LEV III amendments provide reductions from new vehicles sold in California between 2017 and 2025. Passenger vehicles

Table 6: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
		Evaporative Emission Standards	associated with the site would comply with LEV III standards.
	Low Carbon Fuel Standard	2009 readopted in 2015. Regulations to Achieve GHG Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The Project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the Project would utilize low carbon transportation fuels as required under this measure.
	Regional Transportation-Related GHG Targets.	SB 375. Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28	**Consistent**. The Project would provide development in the region that is consistent with the growth projections in the RTP/SCS.
	Goods Movement	Goods Movement Action Plan January 2007	**Not applicable**. The Project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
	Medium/Heavy-Duty Vehicle	2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer GHG Regulation	**Consistent**. This measure applies to medium and heavy-duty vehicles that operate in the state. The Project would not conflict with implementation of this measure. Medium and heavy-duty vehicles associated with construction and operation of the Project would be required to comply with the requirements of this regulation.
	High Speed Rail	Funded under SB 862	**Not applicable**. This is a statewide measure that cannot be implemented by a project applicant or Lead Agency.
Electricity and Natural Gas	Energy Efficiency	Title 20 Appliance Efficiency Regulation	**Consistent.** The Project would not conflict with implementation of this measure. The Project would comply with the latest energy efficiency standards.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020)	**Consistent**. The Project would obtain electricity from the electric utility, Southern California Edison (SCE). SCE obtained 36 percent of its power supply from renewable sources in 2018. Therefore, the utility would provide power when needed on site that is composed of a greater percentage of renewable sources.
	Million Solar Roofs Program	SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	
	Million Solar Roofs Program	Tax Incentive Program	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The program provides incentives that are in place at the time of construction.
Water	Water	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The Project would comply with the CalGreen standards, which requires a 20 percent reduction in indoor water use. The Project would also comply with the City's Water-Efficient Landscaping

Table 6: Project Consistency with Applicable CARB Scoping Plan Measures

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
		SBX 7-7—The Water Conservation Act of 2009	Regulations (Chapter 28, Article IV of the Fontana Municipal Code).
		Model Water Efficient Landscape Ordinance	
Green Buildings	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The State is to increase the use of green building practices. The Project would implement required green building strategies through existing regulation that requires the Project to comply with various CalGreen requirements. The Project includes sustainability design features that support the Green Building Strategy.
Industry	Industrial Emissions	2010 CARB Mandatory Reporting Regulation	**Not applicable.** The Mandatory Reporting Regulation requires facilities and entities with more than 10,000 $MTCO_2e$ of combustion and process emissions, all facilities belonging to certain industries, and all electric power entities to submit an annual GHG emissions data report directly to CARB. As shown above, total Project GHG emissions would not exceed 10,000 $MTCO_2e$. Therefore, this regulation would not apply.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The Project would not conflict with implementation of these measures. The Project is required to achieve the recycling mandates via compliance with the CALGreen code. The City has consistently achieved its state recycling mandates.
		AB 341 Statewide 75 Percent Diversion Goal	
Forests	Sustainable Forests	Cap and Trade Offset Projects	**Not applicable.** The Project is not located in a forested area.
High Global Warming Potential	High Global Warming Potential Gases	CARB Refrigerant Management Program CCR 95380	**Not applicable**. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The Project would not conflict with the refrigerant management regulations adopted by CARB.
Agriculture	Agriculture	Cap and Trade Offset Projects for Livestock and Rice Cultivation	**Not applicable**. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the Project.

Source: California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017 and CARB, *Climate Change Scoping Plan*, December 2008.

The Project is estimated to emit approximately 2,857 $MTCO_2e$ per year directly from on-site activities and indirectly from off-site motor vehicles, see Table 3. As discussed above, the GHG emissions caused by long-term operation of the Project would not exceed the City's 3,000 $MTCO_2e$ per year screening threshold, and impacts would be less than significant.

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the Project would comply with all applicable measures are enacted that state lawmakers decide would lead to an 80 percent reduction below 1990 levels by 2050.

5.3 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of 1 year to several thousand years that allow them to be dispersed around the globe.

Cumulative Impacts

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the Project as well as other cumulative related projects would also be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As shown in Table 4 through Table 5, the Project would not conflict with the GHGRP, or the RTP/SCS. As a result, the Project would not conflict with any GHG reduction plans including the CARB Scoping Plan. Therefore, the Project's cumulative contribution of GHG emissions would be less than significant and the Project's cumulative GHG impacts would also be less than cumulatively considerable.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6 REFERENCES

1. California Air Resources Board, *California's 2017 Climate Change Scoping Plan,* 2017.
2. City of Fontana, *City of Fontana General Plan Update 2015-2035*, 2018.
3. Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007.
4. Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013.
5. National Research Council, *Advancing the Science of Climate Change*, 2010.
6. RGA: Office of Architectural Design, *Schematic Design*, October 2019.
7. San Bernardino County Transportation Authority, *San Bernardino County Regional Greenhouse Gas Reduction Plan*, March 2014.
8. State of California, *Code of Regulations Section 15065.5a*, 2018.
9. Southern California Association of Governments, *2016 - 2040 Regional Transportation Plan/Sustainable Communities Strategy*, 2016.
10. South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13*, 2009.
11. U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018.
12. U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, 2010.
13. U.S. EPA, *Overview of Greenhouse Gases*, 2018.

Appendix A

Greenhouse Gas Emissions Data

Sierra and Casa Grande 5/27/2020

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	10.00	1000sqft	0.11	10,000.00	0
Unrefrigerated Warehouse-No Rail	323.00	1000sqft	7.41	322,996.00	0
Parking Lot	239.15	1000sqft	5.49	239,148.00	0
Other Asphalt Surfaces	16.06	1000sqft	0.37	16,056.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra and Casa Grande 5/27/2020 - San Bernardino-South Coast County, Annual

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - Warehouse 322,996 SF + Office 10,000 SF = 332,996 SF. Not refrigerated - Building Footprint Area = 327,996 SF (5,000 SF mezzanine)
Total Parking Area including drive aisles = 239,148 SF, other surface = offsite improvements

Construction Phase - Using default construction schedule, except assume paving and painting will occur during Construction

Trips and VMT -

Grading - no import/export data available at this time

Architectural Coating - Low VOC Paint

Vehicle Trips - Based on traffic study: 579 ADT, trip rate: 579/322.996= 1.7925918587227086403546793149141

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Vehicle Emission Factors - EMFAC 2017 - San Bernardino County (SC) + Safe Rule

Area Coating - Low VOC paint

Energy Use -

Water And Wastewater -

Construction Off-road Equipment Mitigation - Rule 403

Mobile Commute Mitigation -

Area Mitigation -

Energy Mitigation - CEC - 2019 standards will reduce nonresidential energy use by 30% over 2016 standard

Water Mitigation - use low-flow fixtures

Waste Mitigation - AB 939 - divert atleast 50% of solid waste from landfills

Operational Off-Road Equipment - Assume 2 forklifts for building

Fleet Mix - Fleet Mix based on Traffic Study

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00

tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	20.00	54.00
tblConstructionPhase	NumDays	20.00	54.00
tblFleetMix	HHD	0.06	0.12
tblFleetMix	LDA	0.55	0.44
tblFleetMix	LHD2	5.2670e-003	0.03
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblLandUse	LandUseSquareFeet	323,000.00	322,996.00
tblLandUse	LandUseSquareFeet	239,150.00	239,148.00
tblLandUse	LotAcreage	0.23	0.11
tblLandUse	LotAcreage	7.42	7.41
tblOperationalOffRoadEquipment	OperFuelType	Diesel	Electrical
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.24	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	3.46	56.78

tblVehicleEF	HHD	0.58	0.81
tblVehicleEF	HHD	1.92	1.3630e-003
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tblVehicleEF	HHD	20.20	1.89
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tblVehicleEF	HHD	5.0000e-005	0.00
tblVehicleEF	HHD	9.3000e-005	3.8000e-005
tblVehicleEF	HHD	3.4490e-003	6.0000e-005
tblVehicleEF	HHD	0.89	4.44
tblVehicleEF	HHD	5.7000e-005	2.2000e-005
tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	8.9000e-005	0.00
tblVehicleEF	HHD	9.3000e-005	3.8000e-005
tblVehicleEF	HHD	3.4490e-003	6.0000e-005
tblVehicleEF	HHD	1.02	5.09
tblVehicleEF	HHD	5.7000e-005	2.2000e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	1.17	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	2.52	55.32
tblVehicleEF	HHD	0.58	0.82
tblVehicleEF	HHD	1.80	1.2870e-003
tblVehicleEF	HHD	7,395.94	11,121.59
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.97	60.22
tblVehicleEF	HHD	2.70	3.82
tblVehicleEF	HHD	20.19	1.89
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	0.00
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8820e-003	8.8320e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	0.00
tblVehicleEF	HHD	1.8400e-004	7.5000e-005
tblVehicleEF	HHD	3.9090e-003	6.9000e-005
tblVehicleEF	HHD	0.84	4.62
tblVehicleEF	HHD	1.2900e-004	5.0000e-005
tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.4800e-004	3.0700e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.7000e-005	0.00
tblVehicleEF	HHD	1.8400e-004	7.5000e-005
tblVehicleEF	HHD	3.9090e-003	6.9000e-005
tblVehicleEF	HHD	0.97	5.29
tblVehicleEF	HHD	1.2900e-004	5.0000e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.4800e-004	3.0700e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.34	0.23
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	0.00
tblVehicleEF	HHD	4.76	58.80
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tblVehicleEF	HHD	1.89	1.3520e-003
tblVehicleEF	HHD	6,415.00	11,145.04

tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	26.84	63.77
tblVehicleEF	HHD	2.83	3.98
tblVehicleEF	HHD	20.20	1.89
tblVehicleEF	HHD	0.02	0.10
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	0.00
tblVehicleEF	HHD	0.02	0.09
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8320e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	0.00
tblVehicleEF	HHD	9.4000e-005	4.1000e-005
tblVehicleEF	HHD	3.7830e-003	7.1000e-005
tblVehicleEF	HHD	0.96	4.20
tblVehicleEF	HHD	5.6000e-005	2.4000e-005
tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.5900e-004	3.1300e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	0.06	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	0.00
tblVehicleEF	HHD	9.4000e-005	4.1000e-005
tblVehicleEF	HHD	3.7830e-003	7.1000e-005

tblVehicleEF	HHD	1.10	4.81
tblVehicleEF	HHD	5.6000e-005	2.4000e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.5900e-004	3.1300e-004
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	LDA	4.6640e-003	2.8720e-003
tblVehicleEF	LDA	6.4640e-003	0.05
tblVehicleEF	LDA	0.62	0.73
tblVehicleEF	LDA	1.32	2.18
tblVehicleEF	LDA	261.85	271.31
tblVehicleEF	LDA	59.28	55.44
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.09	0.20
tblVehicleEF	LDA	1.7130e-003	1.5970e-003
tblVehicleEF	LDA	2.3020e-003	1.9440e-003
tblVehicleEF	LDA	1.5790e-003	1.4700e-003
tblVehicleEF	LDA	2.1170e-003	1.7870e-003
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.09	0.24
tblVehicleEF	LDA	2.6230e-003	2.6840e-003
tblVehicleEF	LDA	6.1500e-004	5.4900e-004
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.11	0.11

tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.10	0.27
tblVehicleEF	LDA	5.3170e-003	3.2410e-003
tblVehicleEF	LDA	5.3900e-003	0.05
tblVehicleEF	LDA	0.76	0.88
tblVehicleEF	LDA	1.10	1.83
tblVehicleEF	LDA	286.52	293.82
tblVehicleEF	LDA	59.28	54.78
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.7130e-003	1.5970e-003
tblVehicleEF	LDA	2.3020e-003	1.9440e-003
tblVehicleEF	LDA	1.5790e-003	1.4700e-003
tblVehicleEF	LDA	2.1170e-003	1.7870e-003
tblVehicleEF	LDA	0.10	0.57
tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.8710e-003	2.9070e-003
tblVehicleEF	LDA	6.1100e-004	5.4200e-004
tblVehicleEF	LDA	0.10	0.57
tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46

tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	4.5320e-003	2.8130e-003
tblVehicleEF	LDA	6.4200e-003	0.05
tblVehicleEF	LDA	0.58	0.70
tblVehicleEF	LDA	1.30	2.18
tblVehicleEF	LDA	256.02	267.12
tblVehicleEF	LDA	59.28	55.45
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.09	0.19
tblVehicleEF	LDA	1.7130e-003	1.5970e-003
tblVehicleEF	LDA	2.3020e-003	1.9440e-003
tblVehicleEF	LDA	1.5790e-003	1.4700e-003
tblVehicleEF	LDA	2.1170e-003	1.7870e-003
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.24
tblVehicleEF	LDA	2.5640e-003	2.6430e-003
tblVehicleEF	LDA	6.1500e-004	5.4900e-004
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.02

tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.27
tblVehicleEF	LDT1	0.02	8.7920e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.71	1.72
tblVehicleEF	LDT1	4.02	2.48
tblVehicleEF	LDT1	323.73	321.83
tblVehicleEF	LDT1	72.77	67.22
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	2.8630e-003	2.5670e-003
tblVehicleEF	LDT1	3.8930e-003	3.0690e-003
tblVehicleEF	LDT1	2.6370e-003	2.3630e-003
tblVehicleEF	LDT1	3.5800e-003	2.8220e-003
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.29	0.47
tblVehicleEF	LDT1	3.2600e-003	3.1850e-003
tblVehicleEF	LDT1	7.9900e-004	6.6500e-004
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.66
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.93

tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT1	0.02	9.8170e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	2.05	2.04
tblVehicleEF	LDT1	3.30	2.07
tblVehicleEF	LDT1	352.65	345.31
tblVehicleEF	LDT1	72.77	66.35
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.8630e-003	2.5670e-003
tblVehicleEF	LDT1	3.8930e-003	3.0690e-003
tblVehicleEF	LDT1	2.6370e-003	2.3630e-003
tblVehicleEF	LDT1	3.5800e-003	2.8220e-003
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4170e-003
tblVehicleEF	LDT1	7.8600e-004	6.5700e-004
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	1.26
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.26	0.44

tblVehicleEF	LDT1	0.01	8.6230e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.62	1.66
tblVehicleEF	LDT1	3.95	2.48
tblVehicleEF	LDT1	316.91	317.45
tblVehicleEF	LDT1	72.77	67.23
tblVehicleEF	LDT1	0.17	0.14
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	2.8630e-003	2.5670e-003
tblVehicleEF	LDT1	3.8930e-003	3.0690e-003
tblVehicleEF	LDT1	2.6370e-003	2.3630e-003
tblVehicleEF	LDT1	3.5800e-003	2.8220e-003
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.1410e-003
tblVehicleEF	LDT1	7.9800e-004	6.6500e-004
tblVehicleEF	LDT1	0.20	0.93
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tblVehicleEF	LDT1	0.12	0.63
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT2	6.9330e-003	4.9710e-003

tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.09
tblVehicleEF	LDT2	1.85	2.82
tblVehicleEF	LDT2	363.70	346.08
tblVehicleEF	LDT2	81.97	72.50
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
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tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.36
tblVehicleEF	LDT2	3.6440e-003	3.4240e-003
tblVehicleEF	LDT2	8.5100e-004	7.1700e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LDT2	7.8730e-003	5.5830e-003
tblVehicleEF	LDT2	7.7350e-003	0.07

tblVehicleEF	LDT2	1.04	1.31
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tblVehicleEF	LDT2	397.09	369.05
tblVehicleEF	LDT2	81.97	71.61
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
tblVehicleEF	LDT2	1.5980e-003	1.5480e-003
tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6510e-003
tblVehicleEF	LDT2	8.4600e-004	7.0900e-004
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8730e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.05

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tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	1.7370e-003	1.6820e-003
tblVehicleEF	LDT2	2.4180e-003	2.0150e-003
tblVehicleEF	LDT2	1.5980e-003	1.5480e-003
tblVehicleEF	LDT2	2.2230e-003	1.8520e-003
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
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tblVehicleEF	LDT2	8.5100e-004	7.1800e-004
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tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.14	0.40
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tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43

tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.77	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.27
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.01	9.8530e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5280e-003	2.4630e-003
tblVehicleEF	LHD1	0.01	9.8740e-003
tblVehicleEF	LHD1	9.2600e-004	2.2500e-004
tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4470e-003
tblVehicleEF	LHD1	3.6200e-004	1.0200e-004
tblVehicleEF	LHD1	3.7970e-003	0.04

tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
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tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.8390e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.18	0.83
tblVehicleEF	LHD1	2.58	0.91
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.62
tblVehicleEF	LHD1	30.92	10.18
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.12	1.29
tblVehicleEF	LHD1	0.97	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.01	9.8530e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5280e-003	2.4630e-003
tblVehicleEF	LHD1	0.01	9.8740e-003
tblVehicleEF	LHD1	9.2600e-004	2.2500e-004
tblVehicleEF	LHD1	7.5090e-003	0.08

tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.27	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0370e-003	6.4470e-003
tblVehicleEF	LHD1	3.5800e-004	1.0100e-004
tblVehicleEF	LHD1	7.5090e-003	0.08
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.30	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.7060e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.72	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.26
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.22	1.36

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tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.01	9.8530e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4400e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5280e-003	2.4630e-003
tblVehicleEF	LHD1	0.01	9.8740e-003
tblVehicleEF	LHD1	9.2600e-004	2.2500e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
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tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.28	0.08
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tblVehicleEF	LHD1	6.0360e-003	6.4470e-003
tblVehicleEF	LHD1	3.6100e-004	1.0200e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD2	3.8190e-003	0.05

tblVehicleEF	LHD2	5.2410e-003	4.4730e-003
tblVehicleEF	LHD2	9.1660e-003	9.5030e-003
tblVehicleEF	LHD2	0.12	1.91
tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.29	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54
tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
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tblVehicleEF	LHD2	0.56	0.20
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
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tblVehicleEF	LHD2	2.6810e-003	2.6480e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1400e-004
tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003

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tblVehicleEF	LHD2	2.7300e-004	7.6000e-005
tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
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tblVehicleEF	LHD2	614.63	675.55
tblVehicleEF	LHD2	24.89	7.61
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.59	1.41
tblVehicleEF	LHD2	0.54	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	2.6810e-003	2.6480e-003

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tblVehicleEF	LHD2	3.9100e-004	1.1400e-004
tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003
tblVehicleEF	LHD2	5.9810e-003	6.5320e-003
tblVehicleEF	LHD2	2.7100e-004	7.5000e-005
tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2490e-003	4.4770e-003
tblVehicleEF	LHD2	9.0820e-003	9.4560e-003
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tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.27	0.60
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tblVehicleEF	LHD2	614.63	675.54

tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
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tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2300e-004
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tblVehicleEF	LHD2	2.6810e-003	2.6480e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1400e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8410e-003
tblVehicleEF	LHD2	5.9810e-003	6.5320e-003
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tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	7.2300e-004	0.01
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tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.00	2.35
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	21.02	19.60
tblVehicleEF	MCY	9.91	8.58
tblVehicleEF	MCY	167.12	212.10
tblVehicleEF	MCY	46.87	61.05
tblVehicleEF	MCY	1.17	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
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tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85
tblVehicleEF	MCY	2.0790e-003	2.0990e-003
tblVehicleEF	MCY	6.9500e-004	6.0400e-004
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88

tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
tblVehicleEF	MCY	46.87	59.22
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tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
tblVehicleEF	MCY	3.5370e-003	2.8420e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	1.87	1.62
tblVehicleEF	MCY	2.0790e-003	2.0970e-003
tblVehicleEF	MCY	6.7100e-004	5.8600e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83

tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	2.03	1.77
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
tblVehicleEF	MCY	46.87	60.69
tblVehicleEF	MCY	1.13	1.10
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8190e-003	1.9180e-003
tblVehicleEF	MCY	3.7460e-003	3.0150e-003
tblVehicleEF	MCY	1.7050e-003	1.7950e-003
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tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0900e-003
tblVehicleEF	MCY	6.8600e-004	6.0100e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86

tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98
tblVehicleEF	MDV	0.01	6.4810e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.30
tblVehicleEF	MDV	3.59	3.43
tblVehicleEF	MDV	498.66	426.46
tblVehicleEF	MDV	110.76	89.63
tblVehicleEF	MDV	0.20	0.13
tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2170e-003
tblVehicleEF	MDV	1.1710e-003	8.8700e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51

tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MDV	0.02	7.2390e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.54
tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4570e-003
tblVehicleEF	MDV	1.1600e-003	8.7600e-004
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45

tblVehicleEF	MDV	0.01	6.3480e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.44
tblVehicleEF	MDV	488.33	421.93
tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
tblVehicleEF	MDV	1.8680e-003	1.7780e-003
tblVehicleEF	MDV	2.5890e-003	2.1420e-003
tblVehicleEF	MDV	1.7240e-003	1.6400e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1720e-003
tblVehicleEF	MDV	1.1700e-003	8.8700e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.26
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tblVehicleEF	MH	0.95	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.2000e-004	1.9100e-004
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.44	0.11

tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.74	1.58
tblVehicleEF	MH	6.31	2.05
tblVehicleEF	MH	1,048.28	1,507.73
tblVehicleEF	MH	59.91	19.00
tblVehicleEF	MH	1.50	1.42
tblVehicleEF	MH	0.90	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0900e-004	1.8800e-004
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59

tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.61	1.54
tblVehicleEF	MH	6.87	2.21
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tblVehicleEF	MH	59.91	19.27
tblVehicleEF	MH	1.61	1.50
tblVehicleEF	MH	0.94	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6800e-004
tblVehicleEF	MH	3.2210e-003	3.2700e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.1900e-004	1.9100e-004
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.17	0.10

tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.43	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1450e-003	5.9780e-003
tblVehicleEF	MHD	0.06	3.0950e-003
tblVehicleEF	MHD	0.33	3.22
tblVehicleEF	MHD	0.31	0.52
tblVehicleEF	MHD	6.00	0.36
tblVehicleEF	MHD	155.10	780.82
tblVehicleEF	MHD	1,105.72	1,006.19
tblVehicleEF	MHD	53.92	2.99
tblVehicleEF	MHD	0.63	6.91
tblVehicleEF	MHD	1.08	2.32
tblVehicleEF	MHD	11.74	1.38
tblVehicleEF	MHD	4.3700e-004	0.02
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	4.1800e-004	0.02
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	1.4330e-003	4.5970e-003
tblVehicleEF	MHD	0.05	7.3280e-003
tblVehicleEF	MHD	0.02	0.18
tblVehicleEF	MHD	7.1400e-004	2.3840e-003
tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02

tblVehicleEF	MHD	1.4910e-003	7.3950e-003
tblVehicleEF	MHD	0.01	9.5620e-003
tblVehicleEF	MHD	6.4400e-004	3.0000e-005
tblVehicleEF	MHD	1.4330e-003	4.5970e-003
tblVehicleEF	MHD	0.05	7.3280e-003
tblVehicleEF	MHD	0.03	0.23
tblVehicleEF	MHD	7.1400e-004	2.3840e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.40	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2290e-003	6.0070e-003
tblVehicleEF	MHD	0.05	2.9710e-003
tblVehicleEF	MHD	0.24	2.72
tblVehicleEF	MHD	0.32	0.52
tblVehicleEF	MHD	5.61	0.34
tblVehicleEF	MHD	164.29	793.74
tblVehicleEF	MHD	1,105.72	1,006.20
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tblVehicleEF	MHD	1.01	2.18
tblVehicleEF	MHD	11.70	1.38
tblVehicleEF	MHD	3.6900e-004	0.02
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	3.5300e-004	0.02
tblVehicleEF	MHD	5.3330e-003	0.06

tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	2.8480e-003	8.4260e-003
tblVehicleEF	MHD	0.05	8.5070e-003
tblVehicleEF	MHD	0.02	0.17
tblVehicleEF	MHD	1.6690e-003	4.8010e-003
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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	0.01	9.5630e-003
tblVehicleEF	MHD	6.3800e-004	2.9000e-005
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tblVehicleEF	MHD	0.03	0.22
tblVehicleEF	MHD	1.6690e-003	4.8010e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.38	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	4.1530e-003	5.9780e-003
tblVehicleEF	MHD	0.06	3.0730e-003
tblVehicleEF	MHD	0.46	3.91
tblVehicleEF	MHD	0.31	0.52
tblVehicleEF	MHD	5.90	0.36
tblVehicleEF	MHD	142.41	762.95
tblVehicleEF	MHD	1,105.72	1,006.19
tblVehicleEF	MHD	53.92	2.99

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tblVehicleEF	MHD	11.73	1.38
tblVehicleEF	MHD	5.3200e-004	0.03
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.7000e-005
tblVehicleEF	MHD	5.0900e-004	0.03
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.4000e-005
tblVehicleEF	MHD	1.5800e-003	4.8400e-003
tblVehicleEF	MHD	0.05	8.2350e-003
tblVehicleEF	MHD	0.03	0.19
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02
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tblVehicleEF	MHD	6.4300e-004	3.0000e-005
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tblVehicleEF	MHD	7.0500e-004	2.4390e-003
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.39	0.02
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tblVehicleEF	OBUS	1.1300e-004	0.04
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tblVehicleEF	OBUS	1.0800e-004	0.04
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	9.4600e-004	0.01
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tblVehicleEF	OBUS	0.05	0.19
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tblVehicleEF	OBUS	6.8200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2800e-004	1.3700e-004

tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	9.4600e-004	0.01
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.19
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tblVehicleEF	OBUS	1.92	0.99
tblVehicleEF	OBUS	9.5000e-005	0.03
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4500e-004
tblVehicleEF	OBUS	9.1000e-005	0.03
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02

tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	2.1830e-003	0.03
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.39	0.08
tblVehicleEF	OBUS	7.1200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1800e-004	1.3500e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	2.1830e-003	0.03
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tblVehicleEF	OBUS	0.05	0.19
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tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4500e-004
tblVehicleEF	OBUS	1.3100e-004	0.04
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3300e-004
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tblVehicleEF	OBUS	8.2700e-004	1.3700e-004
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
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tblVehicleEF	SBUS	3.0740e-003	0.02

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tblVehicleEF	SBUS	1.3130e-003	7.4840e-003
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tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.4940e-003
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2800e-004
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tblVehicleEF	SBUS	2.7630e-003	2.7030e-003
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tblVehicleEF	SBUS	4.6500e-004	1.1800e-004
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tblVehicleEF	SBUS	0.12	0.11
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tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	1.3500e-004
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tblVehicleEF	SBUS	2.9370e-003	0.01
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2800e-004
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tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1800e-004
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tblVehicleEF	SBUS	0.29	0.11
tblVehicleEF	SBUS	0.01	0.03
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tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
tblVehicleEF	UBUS	8.4220e-003	3.8760e-003
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tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.19	0.03
tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.6230e-003	1.0600e-004
tblVehicleEF	UBUS	8.4220e-003	3.8760e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2710e-003
tblVehicleEF	UBUS	2.68	4.54

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tblVehicleEF	UBUS	0.08	8.4410e-003
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tblVehicleEF	UBUS	12.23	0.71
tblVehicleEF	UBUS	1,861.83	1,692.28
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tblVehicleEF	UBUS	13.65	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
tblVehicleEF	UBUS	1.2680e-003	1.1700e-004
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tblVehicleEF	UBUS	0.15	8.7360e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	0.67	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0270e-003
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tblVehicleEF	UBUS	0.15	8.7360e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
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tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3770e-003
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tblVehicleEF	UBUS	1,861.83	1,692.28
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tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6530e-003
tblVehicleEF	UBUS	1.3790e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.07	2.5270e-003
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tblVehicleEF	UBUS	9.6690e-003	4.0000e-003
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tblVehicleEF	UBUS	4.2700e-003	2.3060e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03

tblVehicleEF	UBUS	0.01	3.0270e-003
tblVehicleEF	UBUS	1.6140e-003	1.0600e-004
tblVehicleEF	UBUS	9.6690e-003	4.0000e-003
tblVehicleEF	UBUS	0.15	8.2160e-003
tblVehicleEF	UBUS	4.2700e-003	2.3060e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04
tblVehicleTrips	CW_TL	16.60	25.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.68	1.79
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	1.68	1.79
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	1.68	1.79

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2938	2.6850	2.2104	5.5400e-003	0.4079	0.1109	0.5188	0.1542	0.1034	0.2576	0.0000	498.9554	498.9554	0.0775	0.0000	500.8920
2021	1.1459	2.9450	3.0118	7.9300e-003	0.3175	0.1132	0.4306	0.0856	0.1062	0.1918	0.0000	716.1156	716.1156	0.0910	0.0000	718.3901
Maximum	**1.1459**	**2.9450**	**3.0118**	**7.9300e-003**	**0.4079**	**0.1132**	**0.5188**	**0.1542**	**0.1062**	**0.2576**	**0.0000**	**716.1156**	**716.1156**	**0.0910**	**0.0000**	**718.3901**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1183	0.8134	2.2577	5.5400e-003	0.2725	7.8000e-003	0.2803	0.0937	7.6100e-003	0.1013	0.0000	498.9551	498.9551	0.0775	0.0000	500.8917
2021	0.9682	1.1779	3.1659	7.9300e-003	0.2935	8.0800e-003	0.3016	0.0797	7.8800e-003	0.0876	0.0000	716.1152	716.1152	0.0910	0.0000	718.3898
Maximum	**0.9682**	**1.1779**	**3.1659**	**7.9300e-003**	**0.2935**	**8.0800e-003**	**0.3016**	**0.0937**	**7.8800e-003**	**0.1013**	**0.0000**	**716.1152**	**716.1152**	**0.0910**	**0.0000**	**718.3898**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**24.54**	**64.63**	**-3.86**	**0.00**	**21.97**	**92.91**	**38.71**	**27.67**	**92.61**	**57.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	1.4791	0.2773
2	9-1-2020	11-30-2020	1.0933	0.4841
3	12-1-2020	2-28-2021	1.0164	0.4555
4	3-1-2021	5-31-2021	1.0052	0.4542
5	6-1-2021	8-31-2021	2.2357	1.3025
6	9-1-2021	9-30-2021	0.2022	0.0953
		Highest	2.2357	1.3025

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2993	7.0000e-005	7.5400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0146	0.0146	4.0000e-005	0.0000	0.0156
Energy	3.7200e-003	0.0338	0.0284	2.0000e-004		2.5700e-003	2.5700e-003		2.5700e-003	2.5700e-003	0.0000	254.7526	254.7526	0.0131	3.2400e-003	256.0444
Mobile	0.6375	5.0154	6.2737	0.0231	1.4348	0.0504	1.4851	0.3871	0.0487	0.4358	0.0000	2,214.4226	2,214.4226	0.1076	0.0000	2,217.1119
Offroad	0.0336	0.3066	0.3036	4.0000e-004		0.0218	0.0218		0.0200	0.0200	0.0000	34.9157	34.9157	0.0113	0.0000	35.1981
Waste						0.0000	0.0000		0.0000	0.0000	63.5199	0.0000	63.5199	3.7539	0.0000	157.3679
Water						0.0000	0.0000		0.0000	0.0000	24.2608	233.3452	257.6059	2.5051	0.0616	338.5835
Total	**1.9741**	**5.3559**	**6.6133**	**0.0237**	**1.4348**	**0.0747**	**1.5095**	**0.3871**	**0.0713**	**0.4584**	**87.7807**	**2,737.4507**	**2,825.2314**	**6.3910**	**0.0648**	**3,004.3213**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2993	7.0000e-005	7.5400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0146	0.0146	4.0000e-005	0.0000	0.0156
Energy	2.6200e-003	0.0238	0.0200	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	233.4219	233.4219	0.0123	2.9100e-003	234.5976
Mobile	0.6351	4.9812	6.2275	0.0229	1.4186	0.0498	1.4684	0.3827	0.0482	0.4309	0.0000	2,193.0015	2,193.0015	0.1066	0.0000	2,195.6666
Offroad	0.0336	0.3066	0.3036	4.0000e-004		0.0218	0.0218		0.0200	0.0200	0.0000	34.9157	34.9157	0.0113	0.0000	35.1981
Waste						0.0000	0.0000		0.0000	0.0000	31.7600	0.0000	31.7600	1.8770	0.0000	78.6840
Water						0.0000	0.0000		0.0000	0.0000	19.4086	187.0656	206.4742	2.0041	0.0493	271.2582
Total	**1.9707**	**5.3117**	**6.5587**	**0.0234**	**1.4186**	**0.0734**	**1.4920**	**0.3827**	**0.0701**	**0.4528**	**51.1686**	**2,648.4194**	**2,699.5880**	**4.0113**	**0.0522**	**2,815.4199**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.18**	**0.82**	**0.83**	**1.18**	**1.12**	**1.73**	**1.15**	**1.12**	**1.78**	**1.23**	**41.71**	**3.25**	**4.45**	**37.24**	**19.50**	**6.29**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2020	6/12/2020	5	10	
2	Grading	Grading	6/13/2020	7/24/2020	5	30	
3	Building Construction	Building Construction	7/25/2020	9/17/2021	5	300	
4	Paving	Paving	6/18/2021	9/1/2021	5	54	
5	Architectural Coating	Architectural Coating	6/18/2021	9/1/2021	5	54	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 499,494; Non-Residential Outdoor: 166,498; Striped Parking Area: 14,349 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	239.00	94.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	48.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.5000e-004	3.4900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8458	0.8458	3.0000e-005	0.0000	0.8465
Total	**4.4000e-004**	**3.5000e-004**	**3.4900e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8458**	**0.8458**	**3.0000e-005**	**0.0000**	**0.8465**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0407**	**3.1000e-004**	**0.0410**	**0.0223**	**3.1000e-004**	**0.0227**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.5000e-004	3.4900e-003	1.0000e-005	9.1000e-004	1.0000e-005	9.2000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8458	0.8458	3.0000e-005	0.0000	0.8465
Total	**4.4000e-004**	**3.5000e-004**	**3.4900e-003**	**1.0000e-005**	**9.1000e-004**	**1.0000e-005**	**9.2000e-004**	**2.4000e-004**	**1.0000e-005**	**2.5000e-004**	**0.0000**	**0.8458**	**0.8458**	**3.0000e-005**	**0.0000**	**0.8465**

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.1301**	**0.0326**	**0.1627**	**0.0540**	**0.0300**	**0.0840**	**0.0000**	**81.7264**	**81.7264**	**0.0264**	**0.0000**	**82.3872**

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.1600e-003	0.0116	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.8195	2.8195	8.0000e-005	0.0000	2.8216
Total	**1.4800e-003**	**1.1600e-003**	**0.0116**	**3.0000e-005**	**3.2900e-003**	**2.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.8195**	**2.8195**	**8.0000e-005**	**0.0000**	**2.8216**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0586	0.0000	0.0586	0.0243	0.0000	0.0243	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.0495	0.4950	9.3000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	**0.0114**	**0.0495**	**0.4950**	**9.3000e-004**	**0.0586**	**1.5200e-003**	**0.0601**	**0.0243**	**1.5200e-003**	**0.0258**	**0.0000**	**81.7263**	**81.7263**	**0.0264**	**0.0000**	**82.3871**

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4800e-003	1.1600e-003	0.0116	3.0000e-005	3.0300e-003	2.0000e-005	3.0500e-003	8.1000e-004	2.0000e-005	8.3000e-004	0.0000	2.8195	2.8195	8.0000e-005	0.0000	2.8216
Total	**1.4800e-003**	**1.1600e-003**	**0.0116**	**3.0000e-005**	**3.0300e-003**	**2.0000e-005**	**3.0500e-003**	**8.1000e-004**	**2.0000e-005**	**8.3000e-004**	**0.0000**	**2.8195**	**2.8195**	**8.0000e-005**	**0.0000**	**2.8216**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1208	1.0936	0.9604	1.5300e-003		0.0637	0.0637		0.0599	0.0599	0.0000	132.0177	132.0177	0.0322	0.0000	132.8229
Total	**0.1208**	**1.0936**	**0.9604**	**1.5300e-003**		**0.0637**	**0.0637**		**0.0599**	**0.0599**	**0.0000**	**132.0177**	**132.0177**	**0.0322**	**0.0000**	**132.8229**

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0166	0.5720	0.1196	1.4300e-003	0.0338	2.6200e-003	0.0364	9.7500e-003	2.5000e-003	0.0123	0.0000	136.7989	136.7989	9.4700e-003	0.0000	137.0355
Worker	0.0673	0.0529	0.5284	1.4200e-003	0.1494	1.0000e-003	0.1504	0.0397	9.2000e-004	0.0406	0.0000	128.0317	128.0317	3.8500e-003	0.0000	128.1278
Total	**0.0839**	**0.6249**	**0.6480**	**2.8500e-003**	**0.1832**	**3.6200e-003**	**0.1868**	**0.0494**	**3.4200e-003**	**0.0528**	**0.0000**	**264.8306**	**264.8306**	**0.0133**	**0.0000**	**265.1634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0187	0.1274	0.9952	1.5300e-003		2.3200e-003	2.3200e-003		2.3200e-003	2.3200e-003	0.0000	132.0175	132.0175	0.0322	0.0000	132.8227
Total	**0.0187**	**0.1274**	**0.9952**	**1.5300e-003**		**2.3200e-003**	**2.3200e-003**		**2.3200e-003**	**2.3200e-003**	**0.0000**	**132.0175**	**132.0175**	**0.0322**	**0.0000**	**132.8227**

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0166	0.5720	0.1196	1.4300e-003	0.0316	2.6200e-003	0.0343	9.2200e-003	2.5000e-003	0.0117	0.0000	136.7989	136.7989	9.4700e-003	0.0000	137.0355
Worker	0.0673	0.0529	0.5284	1.4200e-003	0.1377	1.0000e-003	0.1387	0.0368	9.2000e-004	0.0377	0.0000	128.0317	128.0317	3.8500e-003	0.0000	128.1278
Total	**0.0839**	**0.6249**	**0.6480**	**2.8500e-003**	**0.1694**	**3.6200e-003**	**0.1730**	**0.0460**	**3.4200e-003**	**0.0495**	**0.0000**	**264.8306**	**264.8306**	**0.0133**	**0.0000**	**265.1634**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1768	1.6212	1.5415	2.5000e-003		0.0892	0.0892		0.0838	0.0838	0.0000	215.4227	215.4227	0.0520	0.0000	216.7220
Total	**0.1768**	**1.6212**	**1.5415**	**2.5000e-003**		**0.0892**	**0.0892**		**0.0838**	**0.0838**	**0.0000**	**215.4227**	**215.4227**	**0.0520**	**0.0000**	**216.7220**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0232	0.8505	0.1731	2.3200e-003	0.0551	1.4600e-003	0.0566	0.0159	1.4000e-003	0.0173	0.0000	222.0147	222.0147	0.0150	0.0000	222.3887
Worker	0.1023	0.0773	0.7920	2.2400e-003	0.2437	1.5900e-003	0.2453	0.0647	1.4600e-003	0.0662	0.0000	202.2436	202.2436	5.6600e-003	0.0000	202.3851
Total	**0.1255**	**0.9278**	**0.9650**	**4.5600e-003**	**0.2988**	**3.0500e-003**	**0.3019**	**0.0806**	**2.8600e-003**	**0.0835**	**0.0000**	**424.2583**	**424.2583**	**0.0206**	**0.0000**	**424.7738**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0305	0.2078	1.6238	2.5000e-003		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003	0.0000	215.4224	215.4224	0.0520	0.0000	216.7217
Total	**0.0305**	**0.2078**	**1.6238**	**2.5000e-003**		**3.7900e-003**	**3.7900e-003**		**3.7900e-003**	**3.7900e-003**	**0.0000**	**215.4224**	**215.4224**	**0.0520**	**0.0000**	**216.7217**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0232	0.8505	0.1731	2.3200e-003	0.0516	1.4600e-003	0.0531	0.0151	1.4000e-003	0.0164	0.0000	222.0147	222.0147	0.0150	0.0000	222.3887
Worker	0.1023	0.0773	0.7920	2.2400e-003	0.2247	1.5900e-003	0.2263	0.0601	1.4600e-003	0.0615	0.0000	202.2436	202.2436	5.6600e-003	0.0000	202.3851
Total	**0.1255**	**0.9278**	**0.9650**	**4.5600e-003**	**0.2763**	**3.0500e-003**	**0.2794**	**0.0751**	**2.8600e-003**	**0.0780**	**0.0000**	**424.2583**	**424.2583**	**0.0206**	**0.0000**	**424.7738**

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0339	0.3488	0.3956	6.2000e-004		0.0183	0.0183		0.0168	0.0168	0.0000	54.0634	54.0634	0.0175	0.0000	54.5005
Paving	7.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0416**	**0.3488**	**0.3956**	**6.2000e-004**		**0.0183**	**0.0183**		**0.0168**	**0.0168**	**0.0000**	**54.0634**	**54.0634**	**0.0175**	**0.0000**	**54.5005**

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.4100e-003	0.0144	4.0000e-005	4.4400e-003	3.0000e-005	4.4700e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.6851	3.6851	1.0000e-004	0.0000	3.6877
Total	**1.8600e-003**	**1.4100e-003**	**0.0144**	**4.0000e-005**	**4.4400e-003**	**3.0000e-005**	**4.4700e-003**	**1.1800e-003**	**3.0000e-005**	**1.2100e-003**	**0.0000**	**3.6851**	**3.6851**	**1.0000e-004**	**0.0000**	**3.6877**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.5700e-003	0.0328	0.4670	6.2000e-004		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003	0.0000	54.0633	54.0633	0.0175	0.0000	54.5005
Paving	7.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0153**	**0.0328**	**0.4670**	**6.2000e-004**		**1.0100e-003**	**1.0100e-003**		**1.0100e-003**	**1.0100e-003**	**0.0000**	**54.0633**	**54.0633**	**0.0175**	**0.0000**	**54.5005**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.4100e-003	0.0144	4.0000e-005	4.0900e-003	3.0000e-005	4.1200e-003	1.0900e-003	3.0000e-005	1.1200e-003	0.0000	3.6851	3.6851	1.0000e-004	0.0000	3.6877
Total	**1.8600e-003**	**1.4100e-003**	**0.0144**	**4.0000e-005**	**4.0900e-003**	**3.0000e-005**	**4.1200e-003**	**1.0900e-003**	**3.0000e-005**	**1.1200e-003**	**0.0000**	**3.6851**	**3.6851**	**1.0000e-004**	**0.0000**	**3.6877**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7884					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9100e-003	0.0412	0.0491	8.0000e-005		2.5400e-003	2.5400e-003		2.5400e-003	2.5400e-003	0.0000	6.8938	6.8938	4.7000e-004	0.0000	6.9056
Total	**0.7943**	**0.0412**	**0.0491**	**8.0000e-005**		**2.5400e-003**	**2.5400e-003**		**2.5400e-003**	**2.5400e-003**	**0.0000**	**6.8938**	**6.8938**	**4.7000e-004**	**0.0000**	**6.9056**

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9700e-003	4.5100e-003	0.0462	1.3000e-004	0.0142	9.0000e-005	0.0143	3.7700e-003	9.0000e-005	3.8600e-003	0.0000	11.7923	11.7923	3.3000e-004	0.0000	11.8006
Total	**5.9700e-003**	**4.5100e-003**	**0.0462**	**1.3000e-004**	**0.0142**	**9.0000e-005**	**0.0143**	**3.7700e-003**	**9.0000e-005**	**3.8600e-003**	**0.0000**	**11.7923**	**11.7923**	**3.3000e-004**	**0.0000**	**11.8006**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7884					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0000e-004	3.4800e-003	0.0495	8.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	6.8938	6.8938	4.7000e-004	0.0000	6.9056
Total	**0.7892**	**3.4800e-003**	**0.0495**	**8.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**6.8938**	**6.8938**	**4.7000e-004**	**0.0000**	**6.9056**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9700e-003	4.5100e-003	0.0462	1.3000e-004	0.0131	9.0000e-005	0.0132	3.5000e-003	9.0000e-005	3.5900e-003	0.0000	11.7923	11.7923	3.3000e-004	0.0000	11.8006
Total	**5.9700e-003**	**4.5100e-003**	**0.0462**	**1.3000e-004**	**0.0131**	**9.0000e-005**	**0.0132**	**3.5000e-003**	**9.0000e-005**	**3.5900e-003**	**0.0000**	**11.7923**	**11.7923**	**3.3000e-004**	**0.0000**	**11.8006**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Implement Trip Reduction Program

Employee Vanpool/Shuttle

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6351	4.9812	6.2275	0.0229	1.4186	0.0498	1.4684	0.3827	0.0482	0.4309	0.0000	2,193.0015	2,193.0015	0.1066	0.0000	2,195.6666
Unmitigated	0.6375	5.0154	6.2737	0.0231	1.4348	0.0504	1.4851	0.3871	0.0487	0.4358	0.0000	2,214.4226	2,214.4226	0.1076	0.0000	2,217.1119

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	579.01	579.01	579.01	3,704,926	3,663,269
Total	579.01	579.01	579.01	3,704,926	3,663,269

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	25.00	8.40	6.90	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Unrefrigerated Warehouse-No Rail	0.436242	0.037123	0.179649	0.119457	0.017229	0.034600	0.046400	0.123300	0.000000	0.000000	0.006000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	207.4778	207.4778	0.0118	2.4400e-003	208.4993
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	217.9112	217.9112	0.0124	2.5600e-003	218.9841
NaturalGas Mitigated	2.6200e-003	0.0238	0.0200	1.4000e-004		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	25.9441	25.9441	5.0000e-004	4.8000e-004	26.0983
NaturalGas Unmitigated	3.7200e-003	0.0338	0.0284	2.0000e-004		2.5700e-003	2.5700e-003		2.5700e-003	2.5700e-003	0.0000	36.8414	36.8414	7.1000e-004	6.8000e-004	37.0603

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	34700	1.9000e-004	1.7000e-003	1.4300e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8517	1.8517	4.0000e-005	3.0000e-005	1.8627
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	655682	3.5400e-003	0.0321	0.0270	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	34.9897	34.9897	6.7000e-004	6.4000e-004	35.1976
Total		**3.7300e-003**	**0.0338**	**0.0284**	**2.0000e-004**		**2.5700e-003**	**2.5700e-003**		**2.5700e-003**	**2.5700e-003**	**0.0000**	**36.8414**	**36.8414**	**7.1000e-004**	**6.7000e-004**	**37.0603**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	24290	1.3000e-004	1.1900e-003	1.0000e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	1.2962	1.2962	2.0000e-005	2.0000e-005	1.3039
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	461884	2.4900e-003	0.0226	0.0190	1.4000e-004		1.7200e-003	1.7200e-003		1.7200e-003	1.7200e-003	0.0000	24.6479	24.6479	4.7000e-004	4.5000e-004	24.7944
Total		**2.6200e-003**	**0.0238**	**0.0200**	**1.5000e-004**		**1.8100e-003**	**1.8100e-003**		**1.8100e-003**	**1.8100e-003**	**0.0000**	**25.9441**	**25.9441**	**4.9000e-004**	**4.7000e-004**	**26.0983**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	95200	22.0418	1.2500e-003	2.6000e-004	22.1503
Parking Lot	83701.8	19.3796	1.1000e-003	2.3000e-004	19.4750
Unrefrigerated Warehouse-No Rail	762271	176.4898	0.0100	2.0700e-003	177.3587
Total		**217.9112**	**0.0124**	**2.5600e-003**	**218.9841**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	85990	19.9094	1.1300e-003	2.3000e-004	20.0074
Parking Lot	83701.8	19.3796	1.1000e-003	2.3000e-004	19.4750
Unrefrigerated Warehouse-No Rail	726418	168.1888	9.5600e-003	1.9800e-003	169.0168
Total		**207.4778**	**0.0118**	**2.4400e-003**	**208.4993**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2993	7.0000e-005	7.5400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0146	0.0146	4.0000e-005	0.0000	0.0156
Unmitigated	1.2993	7.0000e-005	7.5400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0146	0.0146	4.0000e-005	0.0000	0.0156

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0788					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-004	7.0000e-005	7.5400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0146	0.0146	4.0000e-005	0.0000	0.0156
Total	**1.2993**	**7.0000e-005**	**7.5400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0146**	**0.0146**	**4.0000e-005**	**0.0000**	**0.0156**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0788					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-004	7.0000e-005	7.5400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0146	0.0146	4.0000e-005	0.0000	0.0156
Total	**1.2993**	**7.0000e-005**	**7.5400e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0146**	**0.0146**	**4.0000e-005**	**0.0000**	**0.0156**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	206.4742	2.0041	0.0493	271.2582
Unmitigated	257.6059	2.5051	0.0616	338.5835

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.77734 / 1.08934	8.7243	0.0584	1.4600e-003	10.6198
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	74.6937 / 0	248.8817	2.4467	0.0601	327.9637
Total		**257.6059**	**2.5051**	**0.0616**	**338.5835**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	1.42187 / 1.02289	7.3689	0.0467	1.1800e-003	8.8873
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	59.755 / 0	199.1053	1.9574	0.0481	262.3709
Total		**206.4742**	**2.0041**	**0.0493**	**271.2582**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	31.7600	1.8770	0.0000	78.6840
Unmitigated	63.5199	3.7539	0.0000	157.3679

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	9.3	1.8878	0.1116	0.0000	4.6770
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	303.62	61.6321	3.6424	0.0000	152.6910
Total		**63.5199**	**3.7539**	**0.0000**	**157.3679**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	4.65	0.9439	0.0558	0.0000	2.3385
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	151.81	30.8161	1.8212	0.0000	76.3455
Total		**31.7600**	**1.8770**	**0.0000**	**78.6840**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	8.00	260	89	0.20	Electrical

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts	0.0336	0.3066	0.3036	4.0000e-004		0.0218	0.0218		0.0200	0.0200	0.0000	34.9157	34.9157	0.0113	0.0000	35.1981
Total	**0.0336**	**0.3066**	**0.3036**	**4.0000e-004**		**0.0218**	**0.0218**		**0.0200**	**0.0200**	**0.0000**	**34.9157**	**34.9157**	**0.0113**	**0.0000**	**35.1981**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

MEMORANDUM

To:	Kari Cano
From:	Alex Pohlman
	Kimley-Horn and Associates, Inc.
Date:	June 2, 2020
Subject:	Mango Replacement Site: Proposed Sierra Casa Grande Warehouse Residential Replacement Site – Air Quality and Greenhouse Gas Emissions

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Purpose

The purpose of this memorandum is to identify the air quality and greenhouse gas (GHG) emissions associated with the proposed residential replacement site located on the northwest corner of Malaga Street and Mango Avenue (Mango Replacement Site) in the City of Fontana. Specifically, this analysis addresses the air quality impacts referenced in State CEQA Guidelines Section 15332(d).

Project Description

The project is proposing residential replacement sites for the development of residential dwelling units at two project sites within the City of Fontana in efforts to account for the potential residential dwelling units lost with the development of the proposed Sierra Avenue at Casa Grande Drive Warehouse. The two replacement sites are proposed within the City of Fontana and are shown on Exhibit 1. One replacement site is located on the northwest corner of the intersection of Mango Avenue at Malaga Street. The site is currently 5.69 acres and occupied by 14 existing residential dwelling units. The second replacement site, located on the northeast corner of the intersection of Palmetto Avenue at Arrow Boulevard (Palmetto Replacement Site), is mentioned in this memorandum yet analyzed a separate document.

The replacement of residential land uses due to the development of the Sierra Avenue at Casa Grande Drive Warehouse would result in the development of a maximum of 219 new residential dwelling units, in addition to the existing units on each site. The 219 dwelling units would be split proportionally between the two replacement sites as follows:

- **Malaga Street/Mango Avenue Site**: 195 new dwelling units
  - 14 existing dwelling units
  - 209 onsite total dwelling units

  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

- **Palmetto Avenue/Arrow Boulevard Site**: 24 new dwelling units
  - 8 existing dwelling units
  - 32 onsite total dwelling units
  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

Air Quality Impacts

SCAQMD Thresholds

The SCAQMD CEQA Air Quality Handbook provides significance thresholds for volatile organic compounds (VOC) (also referred to as reactive organic gases [ROG]), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), particulate matter 10 microns or less in diameter (PM_{10}), and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$). The thresholds apply to both project construction and operation within the SCAQMD jurisdictional boundaries. If the SCAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in **Table 1: South Coast Air Quality Management District Significance Thresholds**, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 1: South Coast Air Quality Management District Significance Thresholds

Pollutant	Mass Daily Thresholds (pounds per day)	
	Construction	Operations
Nitrogen Oxides (NO_X)	100	55
Volatile Organic Compounds (VOC)[1]	75	55
Particulate Matter up to 10 Microns (PM_{10})	150	150
Particulate Matter up to 2.5 Microns ($PM_{2.5}$)	55	55
Sulphur Oxides (SO_X)	150	150
Carbon Monoxide (CO)	550	550

Notes:
1. VOCs and reactive organic gases (ROGs) are subsets of organic gases that are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Although they represent slightly different subsets of organic gases, they are used interchangeably for the purposes of this analysis.

Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

Construction Emissions

Construction associated with the proposed Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-

precursor pollutants (i.e., ROG and NO_X), PM_{10}, and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from demolition, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The project would demolish fourteen existing single-family dwellings on the 5.69-acre site and construct 126 multi-family units. Construction-generated emissions associated the proposed project were calculated using the CARB-approved California Emissions Estimator Model version 2016.3.2 (CalEEMod), which is designed to model emissions for land use development projects, based on typical construction requirements. See Appendix A (Air Quality and GHG Data) for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the proposed project are identified in **Table 2: Project Construction Emissions**. Based on CalEEMod estimates, the Project is anticipated to take thirteen months to complete.

Table 2: Project Construction Emissions

Construction Year	Emissions (pounds per day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 1	11.94	40.56	40.13	0.08	8.93	5.61
Year 2	11.52	30.72	39.26	0.08	3.68	1.97
SCAQMD Threshold	75	100	550	150	150	55
SCAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

1. SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; replace ground cover of area disturbed; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Table 2 shows that construction pollutant emissions would remain below their respective thresholds with implementation of required SCAQMD Rule 403. The project would also be required to comply with SCAQMD Rules 402 and 1113, which prohibit nuisances and limit VOC content in paints, respectively. Compliance with SCAQMD rules 402 and 1113 would further reduce specific construction-related emissions. As shown above, all criteria pollutant emissions would remain below their respective thresholds and impacts would be less than significant.

Operational Emissions

Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, hearths, consumer products, and architectural coatings). Energy source emissions would be generated from electricity and natural gas (non-hearth) usage. **Table 3: Operational Emissions** summarizes the operational emissions attributable to the proposed project. As shown in **Table 3,** the project's emissions would not exceed SCAQMD thresholds. Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact.

Table 3: Operational Emissions						
Source	**Emissions (pounds per day)[1]**					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Existing Emissions						
Area	4.25	0.30	8.28	0.02	1.08	1.08
Energy	0.01	0.11	0.05	<0.01	<0.01	<0.01
Mobile	0.80	2.53	5.21	0.01	1.03	0.29
Total	**5.06**	**2.94**	**13.54**	**0.03**	**2.11**	**1.37**
Proposed Emissions						
Area	5.36	3.15	18.52	0.02	0.33	0.33
Energy	0.10	0.82	0.35	0.01	0.07	0.07
Mobile	6.47	26.16	51.07	0.15	11.27	3.12
Total	**11.93**	**30.13**	**69.94**	**0.17**	**11.67**	**3.52**
Net Emissions	***6.87***	***27.19***	***56.40***	***0.14***	***9.56***	***2.15***
SCAQMD Threshold	55	55	550	150	150	55
SCAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1. Emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.

Localized Impacts

The nearest sensitive receptors to the project site are the residences to the north located adjacent to the Project site. To identify impacts to sensitive receptors, the SCAQMD recommends addressing Localized Significance Thresholds (LSTs) for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 4: Equipment-Specific Grading Rates** is used to determine the maximum daily disturbed acreage for comparison to LSTs. For this project, the appropriate source receptor area (SRA) for the localized significance thresholds is the Central San Bernardino Valley (SRA 34) area since this area includes the project site. LSTs apply to NO_X, CO, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Based on the daily equipment modeled in CalEEMod, project construction is anticipated to disturb approximately 3.5 acres in a single day. Therefore, the construction LSTs for 3.5 acres has been interpolated for use in this analysis[1].

Table 4: Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Crawler Tractor	4	0.5	8	2.0
	Graders	0	0.5	8	0
	Rubber-Tired Dozers	3	0.5	8	1.5
	Scrapers	0	1.0	8	0
				Total Acres Graded per Day	**3.5**

Source: CalEEMod version 2016.3.2.

The SCAQMD's methodology indicates that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors to the project site are the residents located directly adjacent to Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for the nearest receptors 25 meters were used following the SCAQMD LST methodology. **Table 5: Localized Significance of Construction Emissions**, presents the results of localized emissions during construction activity. **Table 5** shows that the emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities.

According to the SCAQMD localized significance threshold methodology, operational LSTs apply to on-site sources. LSTs for receptors located at 25 meters for SRA 34 were utilized in this analysis. The 5-acre LST threshold is conservatively used for the 5.69-acre project site. The operational emissions shown in **Table 5** include all on-site project-related stationary sources (i.e., area and energy sources). **Table 5** shows that the maximum daily emissions of these pollutants during operations would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during operational activities.

[1] LST thresholds for 3.5 acres were interpolated using the SCAQMD methodology document (SCAQMD, 2008).

Table 5: Localized Significance of Emissions – Maximum Pounds per Day				
Source/Activity	**Emissions (pounds per day)[1,2]**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions				
Demolition	31.44	21.57	2.01	1.51
Site Preparation	40.50	21.15	8.74	5.56
Grading	24.74	15.86	3.59	2.31
Building Construction, Paving, and Architectural Coating	31.88	33.05	1.73	1.61
Maximum Daily Emissions	*40.50*	*33.05*	*8.74*	*5.56*
SCAQMD Localized Screening Threshold (3.5 acres of disturbance at 25 meters)	220	1,339	11	6
Maximum Daily Emissions Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Operational Emissions				
On-Site Emissions (Area and Energy Sources)	0.45	10.55	0.08	0.08
SCAQMD Localized Screening Threshold (5 acres at 25 meters)	270	1,720	4	2
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

Notes:

1. Emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.
2. SCAQMD Rule 403 Fugitive Dust applied for construction emissions. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; replace ground cover of area disturbed; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model data outputs.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service (LOS) of an intersection from the proposed project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. An analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can assist in evaluating the potential for CO exceedances. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 *Air Quality Management Plan*. The Basin was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP.

The 2003 *Air Quality Management Plan* is the most recent AQMP that addresses CO concentrations. As part of the SCAQMD CO Hotspot analysis, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 parts per million (ppm), which is well below the 35-ppm federal standard. The proposed project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's 2003 CO hot-spot analysis. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections from 922 daily vehicle trips attributable to the project (820 net new daily trips). Therefore, impacts would be less than significant in this regard.

Greenhouse Gas Emissions

The project would include direct and indirect GHG emissions from project construction and operations. Construction is considered a direct source since these emissions occur at the site. Direct operational-related GHG emissions for the proposed project would include emissions from area and mobile sources, while indirect emissions are from energy consumption, water demand, and solid waste.

Construction GHG Emissions

Construction of the project would result in direct emissions of CO_2, N_2O, and CH_4 from construction equipment and the transport of materials and construction workers to and from the project site.

Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.[2] Total GHG emissions generated during all phases of construction were combined and are presented in **Table 6: Construction Greenhouse Gas Emissions**. The CalEEMod outputs are contained within Appendix A (Air Quality and GHG Data). As shown in **Table 6**, the project construction would result in 695.12 $MTCO_2e$ (approximately 23.17 $MTCO_2e$/year when amortized over 30 years).

Table 6: Construction Greenhouse Gas Emissions	
Construction	**$MTCO_2e$ per Year**
Total Construction	738.70
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model data outputs.	

Operational GHG Emissions

Operational or long-term emissions occur over the life of the proposed project. GHG emissions would result from direct emissions such as project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power over the life of the project, the energy required to convey water to, and wastewater from the project site, the emissions associated with solid waste generated from the project site, and any fugitive refrigerants from air conditioning or refrigerators. **Table 7: Total Project Greenhouse Gas Emissions** summarizes the total GHG emissions associated with proposed project. As shown, the project would result in a net increase of 2,721.07 $MTCO_2e$/year over the existing emissions. The project would not result in an increase in GHG emissions that exceed the SCAQMD's screening threshold of 3,000 $MTCO_2e$/yr. Therefore, project-related GHG emissions would be less than significant.

Conclusion

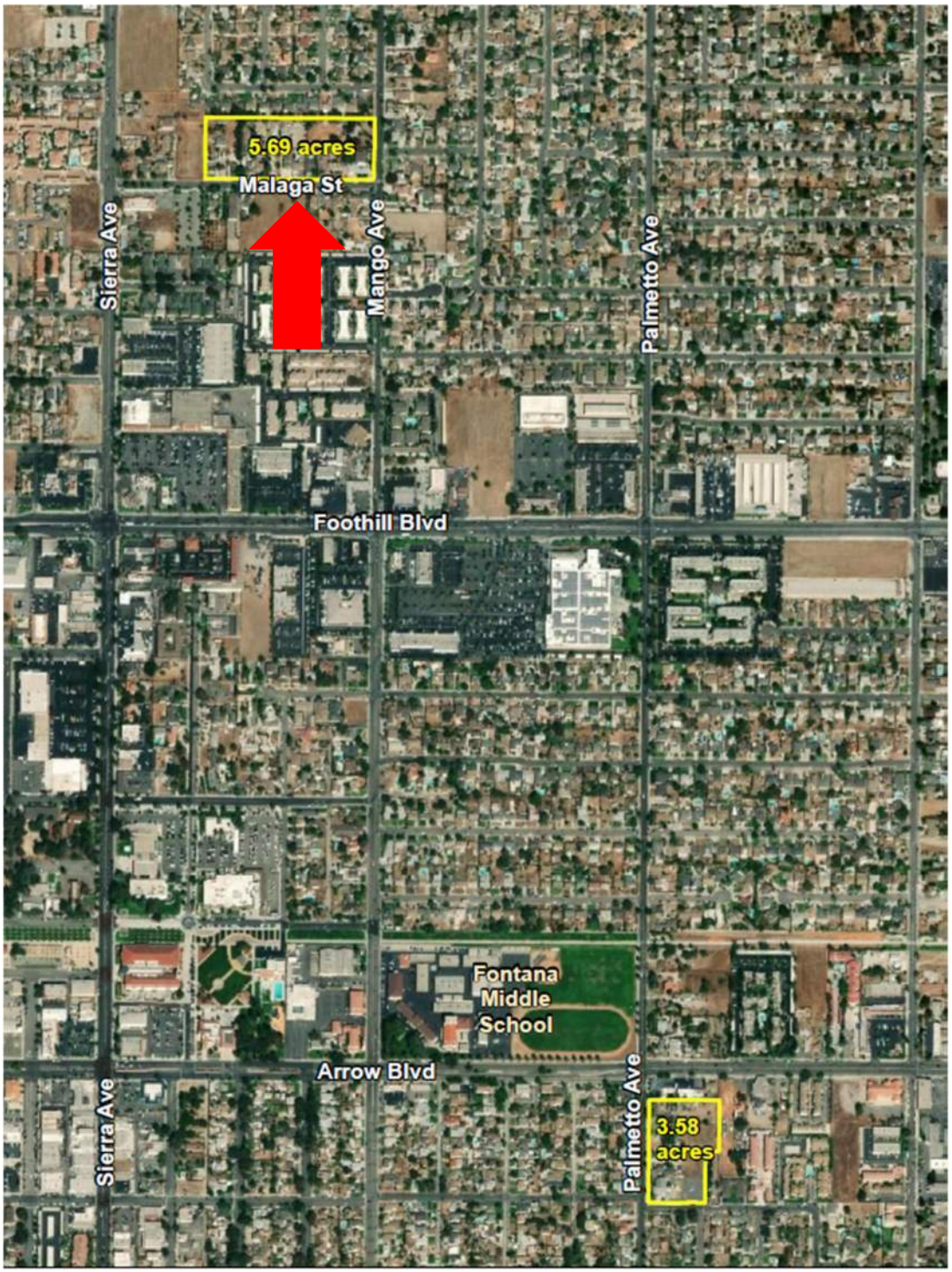
Project implementation would result in less than significant short- and long-term air quality and GHG impacts. No mitigation measures would be required. Therefore, the proposed project would not result in significant effects related to Section 15332(d) of the State CEQA Guidelines.

[2] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 7: Total Project Greenhouse Gas Emissions	
Emissions Source	**$MTCO_2e$ per Year**
Existing Emissions	
Area Source	4.73
Energy	51.39
Mobile	222.87
Waste	8.25
Water & Wastewater	4.60
Total Existing Emissions	**291.83**
Proposed Emissions	
Construction Amortized over 30 Years	24.62
Area Source	3.61
Energy	331.72
Mobile	2,535,93
Waste	48.34
Water & Wastewater	68.67
Total Project Emissions[1]	**3,012.90**
Net Emissions[1]	***2,721.07***
SCAQMD Project Threshold	3,000.00
Threshold Exceeded?	**No**
Notes: 1. Totals may be slightly off due to rounding.	
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model data outputs.	

Kimley»Horn

Exhibit 1 - Project Location



Appendix A

Air Quality and GHG Data

Sierra Casa Grande - Existing Mango Site

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	14.00	Dwelling Unit	5.69	25,200.00	40

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Existing Mango Site - San Bernardino-South Coast County, Winter

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting

Land Use - Based on Traffic Memo, Lot Size is 5.69 acres

Construction Phase - Operation Model only no Construction

Demolition -

Vehicle Trips - CalEEMod trip error

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Energy Use -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	1.00
tblLandUse	LotAcreage	4.55	5.69
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.24	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	6.2010e-008
tblVehicleEF	HHD	3.46	56.78
tblVehicleEF	HHD	0.58	0.81
tblVehicleEF	HHD	1.92	1.3628e-003
tblVehicleEF	HHD	6,983.95	11,131.44
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.07	61.71
tblVehicleEF	HHD	2.87	4.04
tblVehicleEF	HHD	20.20	1.89

tblVehicleEF	HHD	0.01	0.09
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005
tblVehicleEF	HHD	3.4490e-003	6.0404e-005
tblVehicleEF	HHD	0.89	4.44
tblVehicleEF	HHD	5.7000e-005	2.2490e-005
tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.06	3.2392e-007
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	1.2225e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005
tblVehicleEF	HHD	3.4490e-003	6.0404e-005
tblVehicleEF	HHD	1.02	5.09
tblVehicleEF	HHD	5.7000e-005	2.2490e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.07	3.5466e-007

tblVehicleEF	HHD	1.17	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	5.9158e-008
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tblVehicleEF	HHD	0.58	0.82
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tblVehicleEF	HHD	7,395.94	11,121.59
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.97	60.22
tblVehicleEF	HHD	2.70	3.82
tblVehicleEF	HHD	20.19	1.89
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
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tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
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tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04

tblVehicleEF	HHD	0.01	0.05
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tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
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tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	HHD	5.6000e-005	2.3980e-005
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tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
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tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.10	0.27

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tblVehicleEF	LDA	8.0000e-003	8.0000e-003
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tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
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tblVehicleEF	LDA	0.08	0.46

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tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.08	0.23
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tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003
tblVehicleEF	LDA	2.3020e-003	1.9422e-003
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tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
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tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	0.01
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tblVehicleEF	LDA	0.03	0.23
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tblVehicleEF	LDT1	0.29	1.26
tblVehicleEF	LDT1	0.06	0.06
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tblVehicleEF	LDT1	0.26	0.44
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tblVehicleEF	LDT1	3.95	2.48
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tblVehicleEF	LDT1	0.04	0.04
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tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003

tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
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tblVehicleEF	LDT1	0.04	0.04
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tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.36
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tblVehicleEF	LDT2	8.5100e-004	7.1747e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
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tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	0.04	0.04

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tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6513e-003
tblVehicleEF	LDT2	8.4600e-004	7.0862e-004
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8726e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.05
tblVehicleEF	LDT2	1.82	2.82
tblVehicleEF	LDT2	355.82	341.80
tblVehicleEF	LDT2	81.97	72.52

tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LDT2	3.5650e-003	3.3817e-003
tblVehicleEF	LDT2	8.5100e-004	7.1768e-004
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LHD1	5.4860e-003	0.07
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tblVehicleEF	LHD1	0.02	0.02

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tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.77	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.27
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
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tblVehicleEF	LHD1	0.01	9.8527e-003
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tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003

tblVehicleEF	LHD1	6.0360e-003	6.4472e-003
tblVehicleEF	LHD1	3.6200e-004	1.0164e-004
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tblVehicleEF	LHD1	1.8480e-003	0.02
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tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.62
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tblVehicleEF	LHD1	0.01	9.8527e-003
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tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
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tblVehicleEF	LHD1	0.02	0.30
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tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.27	0.07
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tblVehicleEF	LHD1	7.5090e-003	0.08
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tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.30	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.7061e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.72	0.96

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tblVehicleEF	LHD1	30.92	10.26
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tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
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tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
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tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
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tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
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tblVehicleEF	LHD1	0.38	0.56
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tblVehicleEF	LHD1	0.13	0.09
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tblVehicleEF	LHD2	614.63	675.54
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
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tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
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tblVehicleEF	LHD2	1.4000e-003	0.02
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tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
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tblVehicleEF	LHD2	0.54	0.19
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tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
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tblVehicleEF	LHD2	2.7070e-003	0.04
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tblVehicleEF	LHD2	0.02	0.32
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tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2490e-003	4.4768e-003
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tblVehicleEF	LHD2	0.55	0.54
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tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05

tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
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tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
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tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
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tblVehicleEF	MCY	0.16	0.24
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tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003

tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
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tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85
tblVehicleEF	MCY	2.0790e-003	2.0989e-003
tblVehicleEF	MCY	6.9500e-004	6.0412e-004
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tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
tblVehicleEF	MCY	46.87	59.22
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tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
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tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	3.14	5.54
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tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
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tblVehicleEF	MCY	2.0790e-003	2.0974e-003
tblVehicleEF	MCY	6.7100e-004	5.8599e-004
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tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83
tblVehicleEF	MCY	0.50	1.94
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tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08

tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
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tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
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tblVehicleEF	MCY	3.5370e-003	2.8421e-003
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tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0901e-003
tblVehicleEF	MCY	6.8600e-004	6.0062e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98

tblVehicleEF	MDV	0.01	6.4815e-003
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tblVehicleEF	MDV	498.66	426.46
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tblVehicleEF	MDV	0.20	0.13
tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2168e-003
tblVehicleEF	MDV	1.1710e-003	8.8695e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48

tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.31	0.52
tblVehicleEF	MDV	0.02	7.2388e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.53
tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4569e-003
tblVehicleEF	MDV	1.1600e-003	8.7602e-004

tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45
tblVehicleEF	MDV	0.01	6.3475e-003
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tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.43
tblVehicleEF	MDV	488.33	421.93
tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
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tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59

tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1721e-003
tblVehicleEF	MDV	1.1700e-003	8.8718e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
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tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07

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tblVehicleEF	MH	0.03	1.60
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tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.44	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
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tblVehicleEF	MH	3.2210e-003	3.2701e-003
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tblVehicleEF	MH	1.1500e-003	0.00
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tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
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tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004

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tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.01	0.04

tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	3.0740e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.3130e-003	7.4838e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4628e-004
tblVehicleEF	SBUS	3.0740e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.3130e-003	7.4838e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.4937e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.48	28.38
tblVehicleEF	SBUS	0.72	0.87
tblVehicleEF	SBUS	3.76	1.85

tblVehicleEF	SBUS	1,335.64	3,405.36
tblVehicleEF	SBUS	1,144.20	1,125.93
tblVehicleEF	SBUS	36.06	13.61
tblVehicleEF	SBUS	12.86	31.23
tblVehicleEF	SBUS	4.84	5.16
tblVehicleEF	SBUS	15.20	0.76
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	5.9210e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.35
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.23	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	1.3464e-004
tblVehicleEF	SBUS	5.9210e-003	0.03

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.96	4.83
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.25	0.10
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3427e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.85	29.24
tblVehicleEF	SBUS	0.71	0.85
tblVehicleEF	SBUS	5.54	2.67
tblVehicleEF	SBUS	1,181.05	3,221.61
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.98
tblVehicleEF	SBUS	11.91	29.59
tblVehicleEF	SBUS	5.09	5.42
tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03

tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.29	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4820e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.32	0.12
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.2991e-003
tblVehicleEF	UBUS	9.79	34.75
tblVehicleEF	UBUS	14.93	0.84
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.67
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	13.77	0.13
tblVehicleEF	UBUS	0.52	0.07

tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.19	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6230e-003	1.0563e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.30	0.04
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.08	8.4408e-003
tblVehicleEF	UBUS	9.90	34.75
tblVehicleEF	UBUS	12.23	0.71
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.47

tblVehicleEF	UBUS	5.98	0.38
tblVehicleEF	UBUS	13.65	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	0.02	7.1139e-003
tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	0.67	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.5760e-003	1.0359e-004
tblVehicleEF	UBUS	0.02	7.1139e-003
tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	2.69	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.16	0.03
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3769e-003
tblVehicleEF	UBUS	9.80	34.75

tblVehicleEF	UBUS	14.43	0.85
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.69
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	13.74	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6140e-003	1.0583e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04

tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1503	19.3091	17.0572	0.0277	0.0623	1.1179	1.1802	0.0167	1.0511	1.0678	0.0000	2,631.2506	2,631.2506	0.6264	0.0000	2,646.9112
Maximum	**2.1503**	**19.3091**	**17.0572**	**0.0277**	**0.0623**	**1.1179**	**1.1802**	**0.0167**	**1.0511**	**1.0678**	**0.0000**	**2,631.2506**	**2,631.2506**	**0.6264**	**0.0000**	**2,646.9112**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1503	19.3091	17.0572	0.0277	0.0623	1.1179	1.1802	0.0167	1.0511	1.0678	0.0000	2,631.2506	2,631.2506	0.6264	0.0000	2,646.9112
Maximum	**2.1503**	**19.3091**	**17.0572**	**0.0277**	**0.0623**	**1.1179**	**1.1802**	**0.0167**	**1.0511**	**1.0678**	**0.0000**	**2,631.2506**	**2,631.2506**	**0.6264**	**0.0000**	**2,646.9112**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2457	0.3038	8.2773	0.0182		1.0758	1.0758		1.0758	1.0758	131.1369	254.0797	385.2166	0.3931	8.9000e-003	397.6963
Energy	0.0127	0.1082	0.0460	6.9000e-004		8.7400e-003	8.7400e-003		8.7400e-003	8.7400e-003		138.0648	138.0648	2.6500e-003	2.5300e-003	138.8853
Mobile	0.6324	2.5288	4.8381	0.0134	1.0054	0.0209	1.0262	0.2687	0.0207	0.2894		1,404.7053	1,404.7053	0.0904		1,406.9661
Total	**4.8908**	**2.9408**	**13.1614**	**0.0323**	**1.0054**	**1.1054**	**2.1108**	**0.2687**	**1.1053**	**1.3740**	**131.1369**	**1,796.8499**	**1,927.9867**	**0.4862**	**0.0114**	**1,943.5477**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2457	0.3038	8.2773	0.0182		1.0758	1.0758		1.0758	1.0758	131.1369	254.0797	385.2166	0.3931	8.9000e-003	397.6963
Energy	0.0127	0.1082	0.0460	6.9000e-004		8.7400e-003	8.7400e-003		8.7400e-003	8.7400e-003		138.0648	138.0648	2.6500e-003	2.5300e-003	138.8853
Mobile	0.6324	2.5288	4.8381	0.0134	1.0054	0.0209	1.0262	0.2687	0.0207	0.2894		1,404.7053	1,404.7053	0.0904		1,406.9661
Total	**4.8908**	**2.9408**	**13.1614**	**0.0323**	**1.0054**	**1.1054**	**2.1108**	**0.2687**	**1.1053**	**1.3740**	**131.1369**	**1,796.8499**	**1,927.9867**	**0.4862**	**0.0114**	**1,943.5477**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	6/9/2020	6/9/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	5.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2000e-003	0.1047	0.0238	2.6000e-004	6.4000e-003	4.9000e-004	6.9000e-003	1.8400e-003	4.7000e-004	2.3100e-003		27.5000	27.5000	2.0500e-003		27.5514
Worker	0.0273	0.0184	0.1848	5.1000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		50.6875	50.6875	1.5100e-003		50.7253
Total	**0.0305**	**0.1231**	**0.2087**	**7.7000e-004**	**0.0623**	**8.6000e-004**	**0.0632**	**0.0167**	**8.1000e-004**	**0.0175**		**78.1875**	**78.1875**	**3.5600e-003**		**78.2767**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2000e-003	0.1047	0.0238	2.6000e-004	6.4000e-003	4.9000e-004	6.9000e-003	1.8400e-003	4.7000e-004	2.3100e-003		27.5000	27.5000	2.0500e-003		27.5514
Worker	0.0273	0.0184	0.1848	5.1000e-004	0.0559	3.7000e-004	0.0563	0.0148	3.4000e-004	0.0152		50.6875	50.6875	1.5100e-003		50.7253
Total	**0.0305**	**0.1231**	**0.2087**	**7.7000e-004**	**0.0623**	**8.6000e-004**	**0.0632**	**0.0167**	**8.1000e-004**	**0.0175**		**78.1875**	**78.1875**	**3.5600e-003**		**78.2767**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6324	2.5288	4.8381	0.0134	1.0054	0.0209	1.0262	0.2687	0.0207	0.2894		1,404.7053	1,404.7053	0.0904		1,406.9661
Unmitigated	0.6324	2.5288	4.8381	0.0134	1.0054	0.0209	1.0262	0.2687	0.0207	0.2894		1,404.7053	1,404.7053	0.0904		1,406.9661

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	133.28	138.74	120.68	450,483	450,483
Total	133.28	138.74	120.68	450,483	450,483

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.00	20.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0127	0.1082	0.0460	6.9000e-004		8.7400e-003	8.7400e-003		8.7400e-003	8.7400e-003		138.0648	138.0648	2.6500e-003	2.5300e-003	138.8853
NaturalGas Unmitigated	0.0127	0.1082	0.0460	6.9000e-004		8.7400e-003	8.7400e-003		8.7400e-003	8.7400e-003		138.0648	138.0648	2.6500e-003	2.5300e-003	138.8853

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1173.55	0.0127	0.1082	0.0460	6.9000e-004		8.7400e-003	8.7400e-003		8.7400e-003	8.7400e-003		138.0648	138.0648	2.6500e-003	2.5300e-003	138.8853
Total		**0.0127**	**0.1082**	**0.0460**	**6.9000e-004**		**8.7400e-003**	**8.7400e-003**		**8.7400e-003**	**8.7400e-003**		**138.0648**	**138.0648**	**2.6500e-003**	**2.5300e-003**	**138.8853**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1.17355	0.0127	0.1082	0.0460	6.9000e-004		8.7400e-003	8.7400e-003		8.7400e-003	8.7400e-003		138.0648	138.0648	2.6500e-003	2.5300e-003	138.8853
Total		**0.0127**	**0.1082**	**0.0460**	**6.9000e-004**		**8.7400e-003**	**8.7400e-003**		**8.7400e-003**	**8.7400e-003**		**138.0648**	**138.0648**	**2.6500e-003**	**2.5300e-003**	**138.8853**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2457	0.3038	8.2773	0.0182		1.0758	1.0758		1.0758	1.0758	131.1369	254.0797	385.2166	0.3931	8.9000e-003	397.6963
Unmitigated	4.2457	0.3038	8.2773	0.0182		1.0758	1.0758		1.0758	1.0758	131.1369	254.0797	385.2166	0.3931	8.9000e-003	397.6963

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4990					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.6685	0.2905	7.1197	0.0182		1.0694	1.0694		1.0694	1.0694	131.1369	252.0000	383.1369	0.3911	8.9000e-003	395.5661
Landscaping	0.0351	0.0134	1.1575	6.0000e-005		6.3800e-003	6.3800e-003		6.3800e-003	6.3800e-003		2.0797	2.0797	2.0200e-003		2.1301
Total	**4.2457**	**0.3038**	**8.2773**	**0.0182**		**1.0758**	**1.0758**		**1.0758**	**1.0758**	**131.1369**	**254.0797**	**385.2166**	**0.3931**	**8.9000e-003**	**397.6963**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0432					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4990					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.6685	0.2905	7.1197	0.0182		1.0694	1.0694		1.0694	1.0694	131.1369	252.0000	383.1369	0.3911	8.9000e-003	395.5661
Landscaping	0.0351	0.0134	1.1575	6.0000e-005		6.3800e-003	6.3800e-003		6.3800e-003	6.3800e-003		2.0797	2.0797	2.0200e-003		2.1301
Total	**4.2457**	**0.3038**	**8.2773**	**0.0182**		**1.0758**	**1.0758**		**1.0758**	**1.0758**	**131.1369**	**254.0797**	**385.2166**	**0.3931**	**8.9000e-003**	**397.6963**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Existing Mango Site

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	14.00	Dwelling Unit	5.69	25,200.00	40

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Existing Mango Site - San Bernardino-South Coast County, Annual

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting

Land Use - Based on Traffic Memo, Lot Size is 5.69 acres

Construction Phase - Operation Model only no Construction

Demolition -

Vehicle Trips - CalEEMod trip error

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Energy Use -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	1.00
tblLandUse	LotAcreage	4.55	5.69
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.24	0.24
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tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.25
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tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.93

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tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.66
tblVehicleEF	LDT1	0.06	0.06
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tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34

tblVehicleEF	LDT1	0.29	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4170e-003
tblVehicleEF	LDT1	7.8600e-004	6.5655e-004
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	1.26
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.26	0.44
tblVehicleEF	LDT1	0.01	8.6227e-003
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tblVehicleEF	LDT1	1.62	1.66
tblVehicleEF	LDT1	3.95	2.48
tblVehicleEF	LDT1	316.91	317.45
tblVehicleEF	LDT1	72.77	67.23
tblVehicleEF	LDT1	0.17	0.14
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003

tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.1414e-003
tblVehicleEF	LDT1	7.9800e-004	6.6532e-004
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.63
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT2	6.9330e-003	4.9710e-003
tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.09
tblVehicleEF	LDT2	1.85	2.81
tblVehicleEF	LDT2	363.70	346.08
tblVehicleEF	LDT2	81.97	72.50
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003

tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.36
tblVehicleEF	LDT2	3.6440e-003	3.4240e-003
tblVehicleEF	LDT2	8.5100e-004	7.1747e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LDT2	7.8730e-003	5.5829e-003
tblVehicleEF	LDT2	7.7350e-003	0.07
tblVehicleEF	LDT2	1.04	1.31
tblVehicleEF	LDT2	1.53	2.36
tblVehicleEF	LDT2	397.09	369.05
tblVehicleEF	LDT2	81.97	71.61
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	0.04	0.04

tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6513e-003
tblVehicleEF	LDT2	8.4600e-004	7.0862e-004
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8726e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
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tblVehicleEF	LDT2	355.82	341.80
tblVehicleEF	LDT2	81.97	72.52

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tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LDT2	3.5650e-003	3.3817e-003
tblVehicleEF	LDT2	8.5100e-004	7.1768e-004
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LHD1	5.4860e-003	0.07
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tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.77	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.27
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003

tblVehicleEF	LHD1	6.0360e-003	6.4472e-003
tblVehicleEF	LHD1	3.6200e-004	1.0164e-004
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tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.8385e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	2.43
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tblVehicleEF	LHD1	614.92	661.62
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tblVehicleEF	LHD1	0.97	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
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tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
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tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
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tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.27	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0370e-003	6.4475e-003
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tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.30	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.7061e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.72	0.96

tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.26
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.22	1.36
tblVehicleEF	LHD1	1.00	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
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tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
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tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
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tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4472e-003
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tblVehicleEF	LHD1	4.1760e-003	0.04

tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2410e-003	4.4729e-003
tblVehicleEF	LHD2	9.1660e-003	9.5030e-003
tblVehicleEF	LHD2	0.12	1.91
tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.29	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54
tblVehicleEF	LHD2	24.89	7.66
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tblVehicleEF	LHD2	0.56	0.20
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
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tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
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tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
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tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.3190e-003	4.5208e-003
tblVehicleEF	LHD2	8.7380e-003	9.1365e-003
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tblVehicleEF	LHD2	0.56	0.55
tblVehicleEF	LHD2	1.21	0.57
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.55
tblVehicleEF	LHD2	24.89	7.61

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tblVehicleEF	LHD2	0.54	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
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tblVehicleEF	LHD2	0.04	0.04
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tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
tblVehicleEF	LHD2	2.7100e-004	7.5288e-005
tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	1.6130e-003	0.02

tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2490e-003	4.4768e-003
tblVehicleEF	LHD2	9.0820e-003	9.4564e-003
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tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.27	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54
tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.67	1.47
tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05

tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
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tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.00	2.35
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	21.02	19.60
tblVehicleEF	MCY	9.91	8.58
tblVehicleEF	MCY	167.12	212.10
tblVehicleEF	MCY	46.87	61.05
tblVehicleEF	MCY	1.17	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003

tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85
tblVehicleEF	MCY	2.0790e-003	2.0989e-003
tblVehicleEF	MCY	6.9500e-004	6.0412e-004
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
tblVehicleEF	MCY	46.87	59.22
tblVehicleEF	MCY	0.99	0.98

tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	1.87	1.62
tblVehicleEF	MCY	2.0790e-003	2.0974e-003
tblVehicleEF	MCY	6.7100e-004	5.8599e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	2.03	1.77
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08

tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
tblVehicleEF	MCY	46.87	60.69
tblVehicleEF	MCY	1.13	1.10
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0901e-003
tblVehicleEF	MCY	6.8600e-004	6.0062e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98

tblVehicleEF	MDV	0.01	6.4815e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.30
tblVehicleEF	MDV	3.59	3.42
tblVehicleEF	MDV	498.66	426.46
tblVehicleEF	MDV	110.76	89.63
tblVehicleEF	MDV	0.20	0.13
tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2168e-003
tblVehicleEF	MDV	1.1710e-003	8.8695e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48

tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.31	0.52
tblVehicleEF	MDV	0.02	7.2388e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.53
tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4569e-003
tblVehicleEF	MDV	1.1600e-003	8.7602e-004

tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45
tblVehicleEF	MDV	0.01	6.3475e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.43
tblVehicleEF	MDV	488.33	421.93
tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59

tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1721e-003
tblVehicleEF	MDV	1.1700e-003	8.8718e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
tblVehicleEF	MH	1,048.28	1,507.66
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tblVehicleEF	MH	1.64	1.53
tblVehicleEF	MH	0.95	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07

tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.2000e-004	1.9062e-004
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.44	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
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tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03

tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.37	0.10
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tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.61	1.54
tblVehicleEF	MH	6.87	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.27
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tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004

tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1450e-003	5.9776e-003
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tblVehicleEF	MHD	0.06	0.06
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tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	1.4330e-003	4.5971e-003
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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	6.4400e-004	2.9599e-005
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tblVehicleEF	MHD	0.03	0.23
tblVehicleEF	MHD	7.1400e-004	2.3841e-003

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tblVehicleEF	MHD	4.2290e-003	6.0068e-003
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tblVehicleEF	MHD	0.32	0.52
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tblVehicleEF	MHD	1,105.72	1,006.20
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tblVehicleEF	MHD	1.01	2.18
tblVehicleEF	MHD	11.70	1.38
tblVehicleEF	MHD	3.6900e-004	0.02
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tblVehicleEF	MHD	0.01	0.01
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tblVehicleEF	MHD	1.6690e-003	4.8007e-003
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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	11.73	1.38

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tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
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tblVehicleEF	MHD	5.0900e-004	0.03
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	1.5800e-003	4.8402e-003
tblVehicleEF	MHD	0.05	8.2352e-003
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tblVehicleEF	MHD	7.0500e-004	2.4385e-003
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tblVehicleEF	MHD	0.05	8.2352e-003
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tblVehicleEF	MHD	7.0500e-004	2.4385e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.39	0.02

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tblVehicleEF	OBUS	0.01	8.8680e-003
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tblVehicleEF	OBUS	1.1300e-004	0.04
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	5.4210e-003	0.03
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tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	9.4600e-004	0.01
tblVehicleEF	OBUS	0.05	0.09

tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.41	0.08
tblVehicleEF	OBUS	6.8200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2800e-004	1.3703e-004
tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	9.4600e-004	0.01
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.45	0.09
tblVehicleEF	OBUS	0.01	0.13
tblVehicleEF	OBUS	0.01	9.0271e-003
tblVehicleEF	OBUS	0.03	0.01
tblVehicleEF	OBUS	0.26	8.98
tblVehicleEF	OBUS	0.75	0.99
tblVehicleEF	OBUS	6.11	1.56
tblVehicleEF	OBUS	73.34	1,565.29
tblVehicleEF	OBUS	1,126.32	1,439.51
tblVehicleEF	OBUS	71.08	13.65
tblVehicleEF	OBUS	0.33	9.91
tblVehicleEF	OBUS	1.02	1.53
tblVehicleEF	OBUS	1.92	0.99
tblVehicleEF	OBUS	9.5000e-005	0.03
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01

tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4509e-004
tblVehicleEF	OBUS	9.1000e-005	0.03
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	2.1830e-003	0.03
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.39	0.08
tblVehicleEF	OBUS	7.1200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1800e-004	1.3507e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	2.1830e-003	0.03
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.42	0.08
tblVehicleEF	OBUS	0.01	0.13
tblVehicleEF	OBUS	0.01	8.8724e-003
tblVehicleEF	OBUS	0.03	0.02

tblVehicleEF	OBUS	0.28	10.12
tblVehicleEF	OBUS	0.73	0.98
tblVehicleEF	OBUS	6.62	1.68
tblVehicleEF	OBUS	65.88	1,542.13
tblVehicleEF	OBUS	1,126.32	1,439.48
tblVehicleEF	OBUS	71.08	13.85
tblVehicleEF	OBUS	0.31	9.95
tblVehicleEF	OBUS	1.08	1.61
tblVehicleEF	OBUS	1.96	0.99
tblVehicleEF	OBUS	1.3700e-004	0.05
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4509e-004
tblVehicleEF	OBUS	1.3100e-004	0.04
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
tblVehicleEF	OBUS	2.3980e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	9.5900e-004	0.02
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.41	0.08
tblVehicleEF	OBUS	6.4100e-004	0.01

tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2700e-004	1.3709e-004
tblVehicleEF	OBUS	2.3980e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	9.5900e-004	0.02
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.45	0.09
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3513e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.64	28.74
tblVehicleEF	SBUS	0.71	0.85
tblVehicleEF	SBUS	5.49	2.56
tblVehicleEF	SBUS	1,270.71	3,328.19
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.78
tblVehicleEF	SBUS	12.46	30.54
tblVehicleEF	SBUS	5.17	5.50
tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.01	0.04

tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	3.0740e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.3130e-003	7.4838e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4628e-004
tblVehicleEF	SBUS	3.0740e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.3130e-003	7.4838e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.4937e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.48	28.38
tblVehicleEF	SBUS	0.72	0.87
tblVehicleEF	SBUS	3.76	1.85

tblVehicleEF	SBUS	1,335.64	3,405.36
tblVehicleEF	SBUS	1,144.20	1,125.93
tblVehicleEF	SBUS	36.06	13.61
tblVehicleEF	SBUS	12.86	31.23
tblVehicleEF	SBUS	4.84	5.16
tblVehicleEF	SBUS	15.20	0.76
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	5.9210e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.35
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.23	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	1.3464e-004
tblVehicleEF	SBUS	5.9210e-003	0.03

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.96	4.83
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.25	0.10
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3427e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.85	29.24
tblVehicleEF	SBUS	0.71	0.85
tblVehicleEF	SBUS	5.54	2.67
tblVehicleEF	SBUS	1,181.05	3,221.61
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.98
tblVehicleEF	SBUS	11.91	29.59
tblVehicleEF	SBUS	5.09	5.42
tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03

tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.29	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4820e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.32	0.12
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.2991e-003
tblVehicleEF	UBUS	9.79	34.75
tblVehicleEF	UBUS	14.93	0.84
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.67
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	13.77	0.13
tblVehicleEF	UBUS	0.52	0.07

tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.19	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6230e-003	1.0563e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.30	0.04
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.08	8.4408e-003
tblVehicleEF	UBUS	9.90	34.75
tblVehicleEF	UBUS	12.23	0.71
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.47

tblVehicleEF	UBUS	5.98	0.38
tblVehicleEF	UBUS	13.65	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	0.02	7.1139e-003
tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	0.67	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.5760e-003	1.0359e-004
tblVehicleEF	UBUS	0.02	7.1139e-003
tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	2.69	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.16	0.03
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3769e-003
tblVehicleEF	UBUS	9.80	34.75

tblVehicleEF	UBUS	14.43	0.85
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.69
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	13.74	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6140e-003	1.0583e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04

tblVehicleTrips	HO_TTP	40.60	40.00
tblVehicleTrips	HS_TTP	19.20	20.00
tblVehicleTrips	HW_TTP	40.20	40.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.0700e-003	9.6600e-003	8.5300e-003	1.0000e-005	3.0000e-005	5.6000e-004	5.9000e-004	1.0000e-005	5.3000e-004	5.3000e-004	0.0000	1.1943	1.1943	2.8000e-004	0.0000	1.2014
Maximum	**1.0700e-003**	**9.6600e-003**	**8.5300e-003**	**1.0000e-005**	**3.0000e-005**	**5.6000e-004**	**5.9000e-004**	**1.0000e-005**	**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1943**	**1.1943**	**2.8000e-004**	**0.0000**	**1.2014**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.0700e-003	9.6600e-003	8.5300e-003	1.0000e-005	3.0000e-005	5.6000e-004	5.9000e-004	1.0000e-005	5.3000e-004	5.3000e-004	0.0000	1.1943	1.1943	2.8000e-004	0.0000	1.2014
Maximum	**1.0700e-003**	**9.6600e-003**	**8.5300e-003**	**1.0000e-005**	**3.0000e-005**	**5.6000e-004**	**5.9000e-004**	**1.0000e-005**	**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1943**	**1.1943**	**2.8000e-004**	**0.0000**	**1.2014**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Sierra Casa Grande - Existing Mango Site - San Bernardino-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-31-2020	6-29-2020	0.0077	0.0077
		Highest	0.0077	0.0077

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1492	5.3000e-003	0.2337	2.3000e-004		0.0142	0.0142		0.0142	0.0142	1.4871	3.0935	4.5805	4.6600e-003	1.0000e-004	4.7272
Energy	2.3100e-003	0.0197	8.4000e-003	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	51.1122	51.1122	2.0400e-003	7.5000e-004	51.3871
Mobile	0.1090	0.4354	0.8480	2.3400e-003	0.1712	3.5800e-003	0.1748	0.0458	3.5600e-003	0.0494	0.0000	222.5115	222.5115	0.0143	0.0000	222.8685
Waste						0.0000	0.0000		0.0000	0.0000	3.3291	0.0000	3.3291	0.1967	0.0000	8.2476
Water						0.0000	0.0000		0.0000	0.0000	0.2894	4.2292	4.5186	0.0300	7.5000e-004	5.4916
Total	**0.2605**	**0.4605**	**1.0901**	**2.7000e-003**	**0.1712**	**0.0194**	**0.1905**	**0.0458**	**0.0193**	**0.0652**	**5.1055**	**280.9463**	**286.0518**	**0.2477**	**1.6000e-003**	**292.7219**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1492	5.3000e-003	0.2337	2.3000e-004		0.0142	0.0142		0.0142	0.0142	1.4871	3.0935	4.5805	4.6600e-003	1.0000e-004	4.7272
Energy	2.3100e-003	0.0197	8.4000e-003	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	51.1122	51.1122	2.0400e-003	7.5000e-004	51.3871
Mobile	0.1090	0.4354	0.8480	2.3400e-003	0.1712	3.5800e-003	0.1748	0.0458	3.5600e-003	0.0494	0.0000	222.5115	222.5115	0.0143	0.0000	222.8685
Waste						0.0000	0.0000		0.0000	0.0000	3.3291	0.0000	3.3291	0.1967	0.0000	8.2476
Water						0.0000	0.0000		0.0000	0.0000	0.2315	3.5890	3.8205	0.0240	6.0000e-004	4.5999
Total	**0.2605**	**0.4605**	**1.0901**	**2.7000e-003**	**0.1712**	**0.0194**	**0.1905**	**0.0458**	**0.0193**	**0.0652**	**5.0476**	**280.3061**	**285.3537**	**0.2417**	**1.4500e-003**	**291.8302**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.13**	**0.23**	**0.24**	**2.41**	**9.38**	**0.30**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	6/9/2020	6/9/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	5.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0600e-003	9.5900e-003	8.4200e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.3000e-004	5.3000e-004	0.0000	1.1581	1.1581	2.8000e-004	0.0000	1.1651
Total	**1.0600e-003**	**9.5900e-003**	**8.4200e-003**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1581**	**1.1581**	**2.8000e-004**	**0.0000**	**1.1651**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	5.0000e-005	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0128	0.0128	0.0000	0.0000	0.0128
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0235	0.0235	0.0000	0.0000	0.0235
Total	**1.0000e-005**	**6.0000e-005**	**1.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0363**	**0.0363**	**0.0000**	**0.0000**	**0.0363**

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0600e-003	9.5900e-003	8.4200e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.3000e-004	5.3000e-004	0.0000	1.1581	1.1581	2.8000e-004	0.0000	1.1651
Total	**1.0600e-003**	**9.5900e-003**	**8.4200e-003**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1581**	**1.1581**	**2.8000e-004**	**0.0000**	**1.1651**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	5.0000e-005	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0128	0.0128	0.0000	0.0000	0.0128
Worker	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0235	0.0235	0.0000	0.0000	0.0235
Total	**1.0000e-005**	**6.0000e-005**	**1.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0363**	**0.0363**	**0.0000**	**0.0000**	**0.0363**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1090	0.4354	0.8480	2.3400e-003	0.1712	3.5800e-003	0.1748	0.0458	3.5600e-003	0.0494	0.0000	222.5115	222.5115	0.0143	0.0000	222.8685
Unmitigated	0.1090	0.4354	0.8480	2.3400e-003	0.1712	3.5800e-003	0.1748	0.0458	3.5600e-003	0.0494	0.0000	222.5115	222.5115	0.0143	0.0000	222.8685

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	133.28	138.74	120.68	450,483	450,483
Total	133.28	138.74	120.68	450,483	450,483

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.00	20.00	40.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	28.2540	28.2540	1.6100e-003	3.3000e-004	28.3931
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	28.2540	28.2540	1.6100e-003	3.3000e-004	28.3931
NaturalGas Mitigated	2.3100e-003	0.0197	8.4000e-003	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	22.8582	22.8582	4.4000e-004	4.2000e-004	22.9940
NaturalGas Unmitigated	2.3100e-003	0.0197	8.4000e-003	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	22.8582	22.8582	4.4000e-004	4.2000e-004	22.9940

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	428346	2.3100e-003	0.0197	8.4000e-003	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	22.8582	22.8582	4.4000e-004	4.2000e-004	22.9940
Total		**2.3100e-003**	**0.0197**	**8.4000e-003**	**1.3000e-004**		**1.6000e-003**	**1.6000e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**22.8582**	**22.8582**	**4.4000e-004**	**4.2000e-004**	**22.9940**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	428346	2.3100e-003	0.0197	8.4000e-003	1.3000e-004		1.6000e-003	1.6000e-003		1.6000e-003	1.6000e-003	0.0000	22.8582	22.8582	4.4000e-004	4.2000e-004	22.9940
Total		**2.3100e-003**	**0.0197**	**8.4000e-003**	**1.3000e-004**		**1.6000e-003**	**1.6000e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**22.8582**	**22.8582**	**4.4000e-004**	**4.2000e-004**	**22.9940**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	122031	28.2540	1.6100e-003	3.3000e-004	28.3931
Total		**28.2540**	**1.6100e-003**	**3.3000e-004**	**28.3931**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	122031	28.2540	1.6100e-003	3.3000e-004	28.3931
Total		**28.2540**	**1.6100e-003**	**3.3000e-004**	**28.3931**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1492	5.3000e-003	0.2337	2.3000e-004		0.0142	0.0142		0.0142	0.0142	1.4871	3.0935	4.5805	4.6600e-003	1.0000e-004	4.7272
Unmitigated	0.1492	5.3000e-003	0.2337	2.3000e-004		0.0142	0.0142		0.0142	0.0142	1.4871	3.0935	4.5805	4.6600e-003	1.0000e-004	4.7272

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0459	3.6300e-003	0.0890	2.3000e-004		0.0134	0.0134		0.0134	0.0134	1.4871	2.8576	4.3447	4.4300e-003	1.0000e-004	4.4856
Landscaping	4.3800e-003	1.6700e-003	0.1447	1.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	0.2358	0.2358	2.3000e-004	0.0000	0.2416
Total	**0.1492**	**5.3000e-003**	**0.2337**	**2.4000e-004**		**0.0142**	**0.0142**		**0.0142**	**0.0142**	**1.4871**	**3.0935**	**4.5805**	**4.6600e-003**	**1.0000e-004**	**4.7272**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.8800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0459	3.6300e-003	0.0890	2.3000e-004		0.0134	0.0134		0.0134	0.0134	1.4871	2.8576	4.3447	4.4300e-003	1.0000e-004	4.4856
Landscaping	4.3800e-003	1.6700e-003	0.1447	1.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	0.2358	0.2358	2.3000e-004	0.0000	0.2416
Total	**0.1492**	**5.3000e-003**	**0.2337**	**2.4000e-004**		**0.0142**	**0.0142**		**0.0142**	**0.0142**	**1.4871**	**3.0935**	**4.5805**	**4.6600e-003**	**1.0000e-004**	**4.7272**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.8205	0.0240	6.0000e-004	4.5999
Unmitigated	4.5186	0.0300	7.5000e-004	5.4916

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.912156 / 0.575055	4.5186	0.0300	7.5000e-004	5.4916
Total		**4.5186**	**0.0300**	**7.5000e-004**	**5.4916**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.729725 / 0.539977	3.8205	0.0240	6.0000e-004	4.5999
Total		**3.8205**	**0.0240**	**6.0000e-004**	**4.5999**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.3291	0.1967	0.0000	8.2476
Unmitigated	3.3291	0.1967	0.0000	8.2476

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	16.4	3.3291	0.1967	0.0000	8.2476
Total		**3.3291**	**0.1967**	**0.0000**	**8.2476**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	16.4	3.3291	0.1967	0.0000	8.2476
Total		**3.3291**	**0.1967**	**0.0000**	**8.2476**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Mango Ave - Replacement Site

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	209.00	Dwelling Unit	5.69	209,000.00	598

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Mango Ave - Replacement Site - San Bernardino-South Coast County, Summer

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - based on Traffic Memo, lot size is 5.69 acres

Construction Phase - Building Construction, Paving, and Architectural Coating activities are expected to overlap.

Demolition - default squarefootage determined for existing site based on 14 single family units

Architectural Coating -

Vehicle Trips - Based on Traffic Memo, 7.32, CalEEMod trip % error

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Woodstoves - No wood burning per SCAQMD 445

Area Coating -

Energy Use -

Construction Off-road Equipment Mitigation - RULE 402

Area Mitigation -

Energy Mitigation - CEC - homes built under 2019 standards will use about 53% less energy than those under the 2016 standard

Water Mitigation - Low flow fixtures

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	174.00
tblConstructionPhase	NumDays	20.00	174.00
tblFireplaces	NumberWood	10.45	0.00
tblLandUse	LotAcreage	13.06	5.69
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44

tblVehicleEF	HHD	1.21	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.29	60.12
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.82	1.3410e-003
tblVehicleEF	HHD	6,933.41	11,330.49
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	26.50	61.17
tblVehicleEF	HHD	2.50	3.42
tblVehicleEF	HHD	20.21	2.11
tblVehicleEF	HHD	9.7780e-003	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	9.3550e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.84	4.41
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.08	0.08

tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.97	5.05
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.14	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.39	58.80
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.70	1.2660e-003
tblVehicleEF	HHD	7,345.18	11,296.84
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	27.35	59.38
tblVehicleEF	HHD	2.36	3.23
tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	8.2750e-003	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04

tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	7.9170e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	1.6800e-004	7.0000e-005
tblVehicleEF	HHD	3.5970e-003	6.4000e-005
tblVehicleEF	HHD	0.79	4.61
tblVehicleEF	HHD	1.1700e-004	4.7000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.2100e-004	2.8700e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.4000e-005	0.00
tblVehicleEF	HHD	1.6800e-004	7.0000e-005
tblVehicleEF	HHD	3.5970e-003	6.4000e-005
tblVehicleEF	HHD	0.91	5.28
tblVehicleEF	HHD	1.1700e-004	4.7000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.2100e-004	2.8700e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.31	0.22
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00

tblVehicleEF	HHD	4.53	61.95
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.79	1.3300e-003
tblVehicleEF	HHD	6,364.76	11,376.96
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	25.32	63.63
tblVehicleEF	HHD	2.46	3.37
tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005
tblVehicleEF	HHD	0.91	4.13
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.06	0.11

tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.5000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005
tblVehicleEF	HHD	1.05	4.73
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	LDA	4.2030e-003	2.5110e-003
tblVehicleEF	LDA	5.6230e-003	0.05
tblVehicleEF	LDA	0.57	0.67
tblVehicleEF	LDA	1.19	2.11
tblVehicleEF	LDA	251.29	263.44
tblVehicleEF	LDA	57.15	53.83
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.04	0.28
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	9.5370e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.22

tblVehicleEF	LDA	2.5170e-003	2.6060e-003
tblVehicleEF	LDA	5.9200e-004	5.3300e-004
tblVehicleEF	LDA	0.04	0.28
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.24
tblVehicleEF	LDA	4.7900e-003	2.8350e-003
tblVehicleEF	LDA	4.6890e-003	0.04
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	0.99	1.78
tblVehicleEF	LDA	274.94	285.26
tblVehicleEF	LDA	57.15	53.19
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.07	0.17
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.09	0.53
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.7550e-003	2.8220e-003

tblVehicleEF	LDA	5.8800e-004	5.2600e-004
tblVehicleEF	LDA	0.09	0.53
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	4.0860e-003	2.4590e-003
tblVehicleEF	LDA	5.5870e-003	0.05
tblVehicleEF	LDA	0.54	0.64
tblVehicleEF	LDA	1.18	2.11
tblVehicleEF	LDA	245.70	259.38
tblVehicleEF	LDA	57.15	53.84
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	9.3400e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.22
tblVehicleEF	LDA	2.4600e-003	2.5660e-003
tblVehicleEF	LDA	5.9100e-004	5.3300e-004

tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.24
tblVehicleEF	LDT1	0.01	7.5760e-003
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tblVehicleEF	LDT1	1.54	1.52
tblVehicleEF	LDT1	3.61	2.38
tblVehicleEF	LDT1	313.68	312.60
tblVehicleEF	LDT1	70.93	65.25
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.26	0.42
tblVehicleEF	LDT1	3.1570e-003	3.0930e-003
tblVehicleEF	LDT1	7.7300e-004	6.4600e-004
tblVehicleEF	LDT1	0.18	0.86

tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.28	0.46
tblVehicleEF	LDT1	0.02	8.4640e-003
tblVehicleEF	LDT1	0.02	0.07
tblVehicleEF	LDT1	1.85	1.80
tblVehicleEF	LDT1	2.97	2.00
tblVehicleEF	LDT1	341.75	335.30
tblVehicleEF	LDT1	70.93	64.44
tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.20	0.28
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.21	0.36
tblVehicleEF	LDT1	3.4420e-003	3.3180e-003
tblVehicleEF	LDT1	7.6200e-004	6.3800e-004
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31

tblVehicleEF	LDT1	0.27	1.16
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.23	0.40
tblVehicleEF	LDT1	0.01	7.4310e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.47	1.46
tblVehicleEF	LDT1	3.55	2.39
tblVehicleEF	LDT1	307.06	308.38
tblVehicleEF	LDT1	70.93	65.27
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.21	0.29
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.25	0.43
tblVehicleEF	LDT1	3.0890e-003	3.0520e-003
tblVehicleEF	LDT1	7.7200e-004	6.4600e-004
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.58

tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.28	0.47
tblVehicleEF	LDT2	6.3270e-003	4.4090e-003
tblVehicleEF	LDT2	8.1990e-003	0.07
tblVehicleEF	LDT2	0.80	1.00
tblVehicleEF	LDT2	1.67	2.71
tblVehicleEF	LDT2	351.15	333.43
tblVehicleEF	LDT2	79.39	69.90
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.11	0.33
tblVehicleEF	LDT2	3.5180e-003	3.2990e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03

tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.12	0.36
tblVehicleEF	LDT2	7.1840e-003	4.9540e-003
tblVehicleEF	LDT2	6.8290e-003	0.06
tblVehicleEF	LDT2	0.97	1.19
tblVehicleEF	LDT2	1.38	2.28
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tblVehicleEF	LDT2	79.39	69.05
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.13	0.28
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8420e-003	3.5160e-003
tblVehicleEF	LDT2	8.1700e-004	6.8300e-004
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.45

tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	6.1560e-003	4.3220e-003
tblVehicleEF	LDT2	8.1410e-003	0.07
tblVehicleEF	LDT2	0.75	0.96
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tblVehicleEF	LDT2	79.39	69.92
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.11	0.34
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tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
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tblVehicleEF	LDT2	0.08	0.53
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tblVehicleEF	LHD1	5.2170e-003	0.07
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tblVehicleEF	LHD1	0.02	0.01
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tblVehicleEF	LHD1	9.23	128.40
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tblVehicleEF	LHD1	0.09	1.05
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tblVehicleEF	LHD1	9.6500e-004	0.01
tblVehicleEF	LHD1	0.01	9.8770e-003
tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
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tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	3.7070e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.27	0.07

tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9760e-003	6.3570e-003
tblVehicleEF	LHD1	3.5300e-004	1.0000e-004
tblVehicleEF	LHD1	3.7070e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.2280e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42
tblVehicleEF	LHD1	1.09	0.76
tblVehicleEF	LHD1	2.43	0.88
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tblVehicleEF	LHD1	609.20	652.47
tblVehicleEF	LHD1	30.40	10.00
tblVehicleEF	LHD1	0.09	1.05
tblVehicleEF	LHD1	1.98	1.17
tblVehicleEF	LHD1	0.94	0.28
tblVehicleEF	LHD1	9.6500e-004	0.01
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tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01

tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
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tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9770e-003	6.3570e-003
tblVehicleEF	LHD1	3.5000e-004	9.9000e-005
tblVehicleEF	LHD1	7.3080e-003	0.07
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	4.1220e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	0.28	0.07
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.1100e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42
tblVehicleEF	LHD1	1.07	0.75
tblVehicleEF	LHD1	2.55	0.92
tblVehicleEF	LHD1	9.23	128.40

tblVehicleEF	LHD1	609.20	652.45
tblVehicleEF	LHD1	30.40	10.07
tblVehicleEF	LHD1	0.09	1.05
tblVehicleEF	LHD1	2.08	1.23
tblVehicleEF	LHD1	0.97	0.28
tblVehicleEF	LHD1	9.6500e-004	0.01
tblVehicleEF	LHD1	0.01	9.8770e-003
tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.7940e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9760e-003	6.3570e-003
tblVehicleEF	LHD1	3.5200e-004	1.0000e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.7940e-003	0.02

tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6110e-003	4.1040e-003
tblVehicleEF	LHD2	8.1370e-003	8.8770e-003
tblVehicleEF	LHD2	0.12	1.89
tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.20	0.57
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.45
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.49	1.36
tblVehicleEF	LHD2	0.53	0.19
tblVehicleEF	LHD2	1.2830e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3070e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.0300e-004	0.01

tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6700e-004	7.4000e-005
tblVehicleEF	LHD2	1.3070e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	7.0300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6760e-003	4.1460e-003
tblVehicleEF	LHD2	7.7630e-003	8.5350e-003
tblVehicleEF	LHD2	0.12	1.89
tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.13	0.54
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.40
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.40	1.28
tblVehicleEF	LHD2	0.50	0.18
tblVehicleEF	LHD2	1.2830e-003	0.02
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	2.5220e-003	0.04
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6500e-004	7.3000e-005
tblVehicleEF	LHD2	2.5220e-003	0.04
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6180e-003	4.1080e-003
tblVehicleEF	LHD2	8.0640e-003	8.8340e-003
tblVehicleEF	LHD2	0.12	1.89

tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.19	0.57
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.44
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.46	1.33
tblVehicleEF	LHD2	0.52	0.19
tblVehicleEF	LHD2	1.2830e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3460e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6600e-004	7.4000e-005
tblVehicleEF	LHD2	1.3460e-003	0.02

tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.43	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	20.55	19.26
tblVehicleEF	MCY	9.93	8.60
tblVehicleEF	MCY	167.73	212.03
tblVehicleEF	MCY	46.45	60.73
tblVehicleEF	MCY	1.16	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.23	2.33
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.16	1.84
tblVehicleEF	MCY	2.0770e-003	2.0980e-003
tblVehicleEF	MCY	6.9000e-004	6.0100e-004

tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.74	2.87
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.35	2.01
tblVehicleEF	MCY	0.00	2.28
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	20.68	19.28
tblVehicleEF	MCY	9.05	7.90
tblVehicleEF	MCY	167.73	211.90
tblVehicleEF	MCY	46.45	58.88
tblVehicleEF	MCY	0.99	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.17	2.28
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	1.86	1.62
tblVehicleEF	MCY	2.0770e-003	2.0970e-003
tblVehicleEF	MCY	6.6700e-004	5.8300e-004

tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.67	2.81
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	2.02	1.76
tblVehicleEF	MCY	0.00	2.31
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.63	18.76
tblVehicleEF	MCY	9.55	8.44
tblVehicleEF	MCY	167.73	211.17
tblVehicleEF	MCY	46.45	60.38
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.19	2.31
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.08	1.81
tblVehicleEF	MCY	2.0610e-003	2.0900e-003
tblVehicleEF	MCY	6.8200e-004	5.9800e-004

tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.69	2.84
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.27	1.98
tblVehicleEF	MDV	0.01	5.5200e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.35	1.13
tblVehicleEF	MDV	3.25	3.24
tblVehicleEF	MDV	483.94	412.47
tblVehicleEF	MDV	107.92	86.64
tblVehicleEF	MDV	0.17	0.11
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.8500e-003	4.0780e-003
tblVehicleEF	MDV	1.1370e-003	8.5700e-004
tblVehicleEF	MDV	0.10	0.52

tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	0.01	6.2110e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.64	1.35
tblVehicleEF	MDV	2.69	2.71
tblVehicleEF	MDV	526.85	435.67
tblVehicleEF	MDV	107.92	85.59
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.30	0.35
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.03
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	5.2830e-003	4.3080e-003
tblVehicleEF	MDV	1.1260e-003	8.4700e-004
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19

tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.23	0.41
tblVehicleEF	MDV	0.01	5.4050e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.28	1.09
tblVehicleEF	MDV	3.20	3.25
tblVehicleEF	MDV	473.93	408.15
tblVehicleEF	MDV	107.92	86.67
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.7490e-003	4.0360e-003
tblVehicleEF	MDV	1.1360e-003	8.5800e-004
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45

tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.27	0.48
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.07	1.31
tblVehicleEF	MH	6.43	2.11
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.89
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tblVehicleEF	MH	0.91	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0700e-004	1.8700e-004
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07

tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.14	0.09
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.19	1.34
tblVehicleEF	MH	5.84	1.97
tblVehicleEF	MH	1,045.05	1,487.74
tblVehicleEF	MH	59.49	18.64
tblVehicleEF	MH	1.41	1.37
tblVehicleEF	MH	0.86	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.34	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9700e-004	1.8400e-004
tblVehicleEF	MH	2.91	0.20

tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.38	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.08	1.31
tblVehicleEF	MH	6.36	2.12
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.90
tblVehicleEF	MH	1.51	1.45
tblVehicleEF	MH	0.89	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.8700e-004

tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5160e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9450e-003
tblVehicleEF	MHD	0.32	3.17
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.32	0.34
tblVehicleEF	MHD	156.91	758.35
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89
tblVehicleEF	MHD	0.60	5.74
tblVehicleEF	MHD	0.99	1.61
tblVehicleEF	MHD	11.88	1.62
tblVehicleEF	MHD	3.8600e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.6900e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.02	0.16

tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02
tblVehicleEF	MHD	1.5080e-003	7.1830e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1700e-004	2.9000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5800e-003	3.3450e-003
tblVehicleEF	MHD	0.05	2.8280e-003
tblVehicleEF	MHD	0.24	2.75
tblVehicleEF	MHD	0.28	0.33
tblVehicleEF	MHD	4.97	0.32
tblVehicleEF	MHD	166.20	765.37
tblVehicleEF	MHD	1,101.52	974.58
tblVehicleEF	MHD	52.43	2.86
tblVehicleEF	MHD	0.62	5.74
tblVehicleEF	MHD	0.92	1.52
tblVehicleEF	MHD	11.85	1.62
tblVehicleEF	MHD	3.2500e-004	0.01

tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.1100e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.02	0.15
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.30	0.01
tblVehicleEF	MHD	1.5950e-003	7.2500e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1100e-004	2.8000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.33	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	3.5220e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9240e-003
tblVehicleEF	MHD	0.45	3.76
tblVehicleEF	MHD	0.27	0.32

tblVehicleEF	MHD	5.23	0.34
tblVehicleEF	MHD	144.06	748.63
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89
tblVehicleEF	MHD	0.57	5.74
tblVehicleEF	MHD	0.97	1.59
tblVehicleEF	MHD	11.87	1.62
tblVehicleEF	MHD	4.7000e-004	0.02
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	4.4900e-004	0.02
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.03	0.16
tblVehicleEF	MHD	6.4000e-004	2.2230e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02
tblVehicleEF	MHD	1.3860e-003	7.0900e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1600e-004	2.9000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.04	0.21
tblVehicleEF	MHD	6.4000e-004	2.2230e-003

tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	9.9110e-003	6.5960e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	9.35
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.27	1.60
tblVehicleEF	OBUS	70.35	1,526.75
tblVehicleEF	OBUS	1,121.50	1,406.90
tblVehicleEF	OBUS	70.70	13.37
tblVehicleEF	OBUS	0.28	7.45
tblVehicleEF	OBUS	0.97	1.24
tblVehicleEF	OBUS	1.93	1.14
tblVehicleEF	OBUS	6.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	6.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.85
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.19

tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.8400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1700e-004	1.3200e-004
tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.09
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.42	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	0.01	6.7350e-003
tblVehicleEF	OBUS	0.03	0.01
tblVehicleEF	OBUS	0.26	9.12
tblVehicleEF	OBUS	0.65	0.79
tblVehicleEF	OBUS	5.74	1.49
tblVehicleEF	OBUS	73.50	1,523.07
tblVehicleEF	OBUS	1,121.50	1,406.93
tblVehicleEF	OBUS	70.70	13.18
tblVehicleEF	OBUS	0.29	7.27
tblVehicleEF	OBUS	0.90	1.16
tblVehicleEF	OBUS	1.88	1.13
tblVehicleEF	OBUS	5.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	5.1000e-005	0.01

tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.87
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.36	0.07
tblVehicleEF	OBUS	7.1400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0800e-004	1.3000e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.11
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.40	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	9.9380e-003	6.6000e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	9.66
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.22	1.60
tblVehicleEF	OBUS	66.00	1,531.82
tblVehicleEF	OBUS	1,121.50	1,406.90

tblVehicleEF	OBUS	70.70	13.38
tblVehicleEF	OBUS	0.27	7.69
tblVehicleEF	OBUS	0.96	1.22
tblVehicleEF	OBUS	1.91	1.14
tblVehicleEF	OBUS	7.7000e-005	0.02
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	7.4000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.83
tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.4200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1600e-004	1.3200e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.07
tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.42	0.08

tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5840e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.71	29.13
tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.33	2.53
tblVehicleEF	SBUS	1,258.13	3,306.59
tblVehicleEF	SBUS	1,136.31	1,112.17
tblVehicleEF	SBUS	37.11	14.75
tblVehicleEF	SBUS	11.70	29.52
tblVehicleEF	SBUS	4.77	5.20
tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9260e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.27	0.11

tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6300e-004	1.4600e-004
tblVehicleEF	SBUS	2.9260e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.30	0.12
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.7140e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.56	28.79
tblVehicleEF	SBUS	0.66	0.80
tblVehicleEF	SBUS	3.65	1.83
tblVehicleEF	SBUS	1,322.00	3,377.53
tblVehicleEF	SBUS	1,136.31	1,112.20
tblVehicleEF	SBUS	37.11	13.58
tblVehicleEF	SBUS	12.08	30.14
tblVehicleEF	SBUS	4.47	4.88
tblVehicleEF	SBUS	14.99	0.82
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	9.6490e-003	0.03

tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	5.6170e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.37
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.22	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.3500e-004	1.3400e-004
tblVehicleEF	SBUS	5.6170e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.24	0.10
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5760e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.91	29.60
tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.37	2.65
tblVehicleEF	SBUS	1,169.92	3,208.62

tblVehicleEF	SBUS	1,136.31	1,112.17
tblVehicleEF	SBUS	37.11	14.94
tblVehicleEF	SBUS	11.19	28.66
tblVehicleEF	SBUS	4.69	5.12
tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6400e-004	1.4800e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.98	4.87
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003

tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	9.1680e-003
tblVehicleEF	UBUS	9.26	34.75
tblVehicleEF	UBUS	14.34	0.80
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.61
tblVehicleEF	UBUS	5.87	0.38
tblVehicleEF	UBUS	13.57	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.15	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6240e-003	1.0500e-004

tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.25	0.04
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	8.3240e-003
tblVehicleEF	UBUS	9.36	34.75
tblVehicleEF	UBUS	11.74	0.68
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.41
tblVehicleEF	UBUS	5.45	0.38
tblVehicleEF	UBUS	13.45	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	0.62	0.07
tblVehicleEF	UBUS	0.02	0.04

tblVehicleEF	UBUS	1.02	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.5790e-003	1.0300e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	2.52	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.12	0.03
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	9.2430e-003
tblVehicleEF	UBUS	9.27	34.75
tblVehicleEF	UBUS	13.86	0.81
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.63
tblVehicleEF	UBUS	5.76	0.38
tblVehicleEF	UBUS	13.55	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003

tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.13	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6160e-003	1.0500e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.24	0.04
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32
tblWoodstoves	NumberCatalytic	10.45	0.00
tblWoodstoves	NumberNoncatalytic	10.45	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	11.9390	40.5536	41.5179	0.0801	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	7,801.5763	7,801.5763	1.4495	0.0000	7,837.8132
2022	11.5078	30.7118	40.5425	0.0792	2.3205	1.4752	3.7958	0.6186	1.3807	1.9994	0.0000	7,720.9933	7,720.9933	1.4369	0.0000	7,756.9167
Maximum	**11.9390**	**40.5536**	**41.5179**	**0.0801**	**18.2675**	**2.0458**	**20.3132**	**9.9840**	**1.8821**	**11.8661**	**0.0000**	**7,801.5763**	**7,801.5763**	**1.4495**	**0.0000**	**7,837.8132**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	11.9390	40.5536	41.5179	0.0801	6.8843	2.0458	8.9300	3.7301	1.8821	5.6122	0.0000	7,801.5763	7,801.5763	1.4495	0.0000	7,837.8131
2022	11.5078	30.7118	40.5425	0.0792	2.2008	1.4752	3.6761	0.5892	1.3807	1.9700	0.0000	7,720.9933	7,720.9933	1.4369	0.0000	7,756.9167
Maximum	**11.9390**	**40.5536**	**41.5179**	**0.0801**	**6.8843**	**2.0458**	**8.9300**	**3.7301**	**1.8821**	**5.6122**	**0.0000**	**7,801.5763**	**7,801.5763**	**1.4495**	**0.0000**	**7,837.8131**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**55.87**	**0.00**	**47.71**	**59.26**	**0.00**	**45.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3627	3.1460	18.5153	0.0197		0.3336	0.3336		0.3336	0.3336	0.0000	3,793.0475	3,793.0475	0.1021	0.0690	3,816.1520
Energy	0.0962	0.8219	0.3497	5.2500e-003		0.0665	0.0665		0.0665	0.0665		1,049.1766	1,049.1766	0.0201	0.0192	1,055.4114
Mobile	8.2200	24.7141	54.8171	0.1525	11.1236	0.1465	11.2701	2.9728	0.1478	3.1207		15,963.9496	15,963.9496	0.9449		15,987.5720
Total	**13.6789**	**28.6819**	**73.6821**	**0.1775**	**11.1236**	**0.5466**	**11.6702**	**2.9728**	**0.5479**	**3.5208**	**0.0000**	**20,806.1737**	**20,806.1737**	**1.0671**	**0.0882**	**20,859.1354**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.0179	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954	0.0000	31.0475	31.0475	0.0300	0.0000	31.7963
Energy	0.0649	0.5549	0.2361	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.4049	708.4049	0.0136	0.0130	712.6146
Mobile	8.2200	24.7141	54.8171	0.1525	11.1236	0.1465	11.2701	2.9728	0.1478	3.1207		15,963.9496	15,963.9496	0.9449		15,987.5720
Total	**13.3028**	**25.4681**	**72.3145**	**0.1570**	**11.1236**	**0.2868**	**11.4103**	**2.9728**	**0.2881**	**3.2609**	**0.0000**	**16,703.4020**	**16,703.4020**	**0.9884**	**0.0130**	**16,731.9829**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.75**	**11.21**	**1.86**	**11.56**	**0.00**	**47.54**	**2.23**	**0.00**	**47.42**	**7.38**	**0.00**	**19.72**	**19.72**	**7.37**	**85.27**	**19.79**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	6/1/2021	1/28/2022	5	174	
6	Architectural Coating	Architectural Coating	6/1/2021	1/28/2022	5	174	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 423,225; Residential Outdoor: 141,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Sierra Casa Grande - Mango Ave - Replacement Site - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	115.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	150.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2403	0.0000	1.2403	0.1878	0.0000	0.1878			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**1.2403**	**1.5513**	**2.7916**	**0.1878**	**1.4411**	**1.6289**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0342	1.3115	0.2031	4.4700e-003	0.1006	3.7100e-003	0.1043	0.0276	3.5500e-003	0.0311		474.4841	474.4841	0.0254		475.1199
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.1104**	**1.3586**	**0.8241**	**6.1200e-003**	**0.2683**	**4.7800e-003**	**0.2731**	**0.0721**	**4.5400e-003**	**0.0766**		**638.5962**	**638.5962**	**0.0301**		**639.3488**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4595	0.0000	0.4595	0.0696	0.0000	0.0696			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.4595**	**1.5513**	**2.0109**	**0.0696**	**1.4411**	**1.5107**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0342	1.3115	0.2031	4.4700e-003	0.0961	3.7100e-003	0.0998	0.0265	3.5500e-003	0.0300		474.4841	474.4841	0.0254		475.1199
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.1104**	**1.3586**	**0.8241**	**6.1200e-003**	**0.2550**	**4.7800e-003**	**0.2598**	**0.0688**	**4.5400e-003**	**0.0733**		**638.5962**	**638.5962**	**0.0301**		**639.3488**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746
Total	**0.0915**	**0.0565**	**0.7452**	**1.9800e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0545**		**196.9345**	**196.9345**	**5.6000e-003**		**197.0746**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6936	0.0000	6.6936	3.6793	0.0000	3.6793			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**6.6936**	**2.0445**	**8.7380**	**3.6793**	**1.8809**	**5.5602**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.1907	1.2900e-003	0.1920	0.0508	1.1900e-003	0.0520		196.9345	196.9345	5.6000e-003		197.0746
Total	**0.0915**	**0.0565**	**0.7452**	**1.9800e-003**	**0.1907**	**1.2900e-003**	**0.1920**	**0.0508**	**1.1900e-003**	**0.0520**		**196.9345**	**196.9345**	**5.6000e-003**		**197.0746**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5523**	**1.1599**	**7.7123**	**3.3675**	**1.0671**	**4.4346**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4276	0.0000	2.4276	1.2477	0.0000	1.2477			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**2.4276**	**1.1599**	**3.5876**	**1.2477**	**1.0671**	**2.3148**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0569	2.1216	0.3992	5.9300e-003	0.1409	3.6400e-003	0.1445	0.0406	3.4800e-003	0.0441		626.0965	626.0965	0.0396		627.0856
Worker	0.7621	0.4711	6.2098	0.0165	1.6767	0.0107	1.6874	0.4447	9.8800e-003	0.4545		1,641.1208	1,641.1208	0.0467		1,642.2885
Total	**0.8191**	**2.5927**	**6.6090**	**0.0224**	**1.8176**	**0.0144**	**1.8319**	**0.4852**	**0.0134**	**0.4986**		**2,267.2173**	**2,267.2173**	**0.0863**		**2,269.3741**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0569	2.1216	0.3992	5.9300e-003	0.1349	3.6400e-003	0.1385	0.0391	3.4800e-003	0.0426		626.0965	626.0965	0.0396		627.0856
Worker	0.7621	0.4711	6.2098	0.0165	1.5892	0.0107	1.5999	0.4232	9.8800e-003	0.4331		1,641.1208	1,641.1208	0.0467		1,642.2885
Total	**0.8191**	**2.5927**	**6.6090**	**0.0224**	**1.7241**	**0.0144**	**1.7384**	**0.4623**	**0.0134**	**0.4756**		**2,267.2173**	**2,267.2173**	**0.0863**		**2,269.3741**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0530	2.0122	0.3691	5.8900e-003	0.1409	3.0600e-003	0.1440	0.0406	2.9200e-003	0.0435		621.0767	621.0767	0.0382		622.0316
Worker	0.7117	0.4236	5.7046	0.0159	1.6767	0.0104	1.6871	0.4447	9.5900e-003	0.4542		1,581.9036	1,581.9036	0.0419		1,582.9510
Total	**0.7648**	**2.4357**	**6.0737**	**0.0218**	**1.8176**	**0.0135**	**1.8310**	**0.4852**	**0.0125**	**0.4977**		**2,202.9803**	**2,202.9803**	**0.0801**		**2,204.9826**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0530	2.0122	0.3691	5.8900e-003	0.1349	3.0600e-003	0.1379	0.0391	2.9200e-003	0.0420		621.0767	621.0767	0.0382		622.0316
Worker	0.7117	0.4236	5.7046	0.0159	1.5892	0.0104	1.5996	0.4232	9.5900e-003	0.4328		1,581.9036	1,581.9036	0.0419		1,582.9510
Total	**0.7648**	**2.4357**	**6.0737**	**0.0218**	**1.7241**	**0.0135**	**1.7375**	**0.4623**	**0.0125**	**0.4748**		**2,202.9803**	**2,202.9803**	**0.0801**		**2,204.9826**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0712	0.0424	0.5705	1.5900e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		158.1904	158.1904	4.1900e-003		158.2951
Total	**0.0712**	**0.0424**	**0.5705**	**1.5900e-003**	**0.1677**	**1.0400e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**158.1904**	**158.1904**	**4.1900e-003**		**158.2951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0712	0.0424	0.5705	1.5900e-003	0.1589	1.0400e-003	0.1600	0.0423	9.6000e-004	0.0433		158.1904	158.1904	4.1900e-003		158.2951
Total	**0.0712**	**0.0424**	**0.5705**	**1.5900e-003**	**0.1589**	**1.0400e-003**	**0.1600**	**0.0423**	**9.6000e-004**	**0.0433**		**158.1904**	**158.1904**	**4.1900e-003**		**158.2951**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**7.7348**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1524	0.0942	1.2420	3.3000e-003	0.3353	2.1400e-003	0.3375	0.0889	1.9800e-003	0.0909		328.2242	328.2242	9.3400e-003		328.4577
Total	**0.1524**	**0.0942**	**1.2420**	**3.3000e-003**	**0.3353**	**2.1400e-003**	**0.3375**	**0.0889**	**1.9800e-003**	**0.0909**		**328.2242**	**328.2242**	**9.3400e-003**		**328.4577**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**7.7348**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1524	0.0942	1.2420	3.3000e-003	0.3178	2.1400e-003	0.3200	0.0846	1.9800e-003	0.0866		328.2242	328.2242	9.3400e-003		328.4577
Total	**0.1524**	**0.0942**	**1.2420**	**3.3000e-003**	**0.3178**	**2.1400e-003**	**0.3200**	**0.0846**	**1.9800e-003**	**0.0866**		**328.2242**	**328.2242**	**9.3400e-003**		**328.4577**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**7.7204**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1424	0.0847	1.1409	3.1800e-003	0.3353	2.0800e-003	0.3374	0.0889	1.9200e-003	0.0909		316.3807	316.3807	8.3800e-003		316.5902
Total	**0.1424**	**0.0847**	**1.1409**	**3.1800e-003**	**0.3353**	**2.0800e-003**	**0.3374**	**0.0889**	**1.9200e-003**	**0.0909**		**316.3807**	**316.3807**	**8.3800e-003**		**316.5902**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**7.7204**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1424	0.0847	1.1409	3.1800e-003	0.3178	2.0800e-003	0.3199	0.0846	1.9200e-003	0.0866		316.3807	316.3807	8.3800e-003		316.5902
Total	**0.1424**	**0.0847**	**1.1409**	**3.1800e-003**	**0.3178**	**2.0800e-003**	**0.3199**	**0.0846**	**1.9200e-003**	**0.0866**		**316.3807**	**316.3807**	**8.3800e-003**		**316.5902**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.2200	24.7141	54.8171	0.1525	11.1236	0.1465	11.2701	2.9728	0.1478	3.1207		15,963.9496	15,963.9496	0.9449		15,987.5720
Unmitigated	8.2200	24.7141	54.8171	0.1525	11.1236	0.1465	11.2701	2.9728	0.1478	3.1207		15,963.9496	15,963.9496	0.9449		15,987.5720

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,529.88	1,529.88	1529.88	5,227,832	5,227,832
Total	1,529.88	1,529.88	1,529.88	5,227,832	5,227,832

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0649	0.5549	0.2361	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.4049	708.4049	0.0136	0.0130	712.6146
NaturalGas Unmitigated	0.0962	0.8219	0.3497	5.2500e-003		0.0665	0.0665		0.0665	0.0665		1,049.1766	1,049.1766	0.0201	0.0192	1,055.4114

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	8918	0.0962	0.8219	0.3497	5.2500e-003		0.0665	0.0665		0.0665	0.0665		1,049.1766	1,049.1766	0.0201	0.0192	1,055.4114
Total		**0.0962**	**0.8219**	**0.3497**	**5.2500e-003**		**0.0665**	**0.0665**		**0.0665**	**0.0665**		**1,049.1766**	**1,049.1766**	**0.0201**	**0.0192**	**1,055.4114**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6.02144	0.0649	0.5549	0.2361	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.4049	708.4049	0.0136	0.0130	712.6146
Total		**0.0649**	**0.5549**	**0.2361**	**3.5400e-003**		**0.0449**	**0.0449**		**0.0449**	**0.0449**		**708.4049**	**708.4049**	**0.0136**	**0.0130**	**712.6146**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.0179	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954	0.0000	31.0475	31.0475	0.0300	0.0000	31.7963
Unmitigated	5.3627	3.1460	18.5153	0.0197		0.3336	0.3336		0.3336	0.3336	0.0000	3,793.0475	3,793.0475	0.1021	0.0690	3,816.1520

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3449	2.9469	1.2540	0.0188		0.2383	0.2383		0.2383	0.2383	0.0000	3,762.0000	3,762.0000	0.0721	0.0690	3,784.3557
Landscaping	0.5214	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954		31.0475	31.0475	0.0300		31.7963
Total	**5.3627**	**3.1460**	**18.5153**	**0.0197**		**0.3336**	**0.3336**		**0.3336**	**0.3336**	**0.0000**	**3,793.0475**	**3,793.0475**	**0.1021**	**0.0690**	**3,816.1520**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5214	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954		31.0475	31.0475	0.0300		31.7963
Total	**5.0179**	**0.1991**	**17.2613**	**9.1000e-004**		**0.0954**	**0.0954**		**0.0954**	**0.0954**	**0.0000**	**31.0475**	**31.0475**	**0.0300**	**0.0000**	**31.7963**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Mango Ave - Replacement Site

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	209.00	Dwelling Unit	5.69	209,000.00	598

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Mango Ave - Replacement Site - San Bernardino-South Coast County, Winter

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - based on Traffic Memo, lot size is 5.69 acres

Construction Phase - Building Construction, Paving, and Architectural Coating activities are expected to overlap.

Demolition - default squarefootage determined for existing site based on 14 single family units

Architectural Coating -

Vehicle Trips - Based on Traffic Memo, 7.32, CalEEMod trip % error

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Woodstoves - No wood burning per SCAQMD 445

Area Coating -

Energy Use -

Construction Off-road Equipment Mitigation - RULE 402

Area Mitigation -

Energy Mitigation - CEC - homes built under 2019 standards will use about 53% less energy than those under the 2016 standard

Water Mitigation - Low flow fixtures

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	174.00
tblConstructionPhase	NumDays	20.00	174.00
tblFireplaces	NumberWood	10.45	0.00
tblLandUse	LotAcreage	13.06	5.69
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44

tblVehicleEF	HHD	1.21	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.29	60.12
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.82	1.3410e-003
tblVehicleEF	HHD	6,933.41	11,330.49
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	26.50	61.17
tblVehicleEF	HHD	2.50	3.42
tblVehicleEF	HHD	20.21	2.11
tblVehicleEF	HHD	9.7780e-003	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	9.3550e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.84	4.41
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.08	0.08

tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.97	5.05
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.14	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.39	58.80
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.70	1.2660e-003
tblVehicleEF	HHD	7,345.18	11,296.84
tblVehicleEF	HHD	1,475.79	1,484.27
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tblVehicleEF	HHD	27.35	59.38
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tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	8.2750e-003	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04

tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	7.9170e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
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tblVehicleEF	HHD	4.7000e-005	0.00
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tblVehicleEF	HHD	3.5970e-003	6.4000e-005
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tblVehicleEF	HHD	1.1700e-004	4.7000e-005
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tblVehicleEF	HHD	2.2100e-004	2.8700e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.4000e-005	0.00
tblVehicleEF	HHD	1.6800e-004	7.0000e-005
tblVehicleEF	HHD	3.5970e-003	6.4000e-005
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tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.31	0.22
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00

tblVehicleEF	HHD	4.53	61.95
tblVehicleEF	HHD	0.57	0.67
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tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005
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tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.06	0.11

tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.5000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005
tblVehicleEF	HHD	1.05	4.73
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.06	0.00
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tblVehicleEF	LDA	1.19	2.11
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tblVehicleEF	LDA	57.15	53.83
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tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	9.5370e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.22

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tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.24
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tblVehicleEF	LDA	0.07	0.17
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tblVehicleEF	LDA	0.07	0.42
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.7550e-003	2.8220e-003

tblVehicleEF	LDA	5.8800e-004	5.2600e-004
tblVehicleEF	LDA	0.09	0.53
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	4.0860e-003	2.4590e-003
tblVehicleEF	LDA	5.5870e-003	0.05
tblVehicleEF	LDA	0.54	0.64
tblVehicleEF	LDA	1.18	2.11
tblVehicleEF	LDA	245.70	259.38
tblVehicleEF	LDA	57.15	53.84
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	9.3400e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.22
tblVehicleEF	LDA	2.4600e-003	2.5660e-003
tblVehicleEF	LDA	5.9100e-004	5.3300e-004

tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.24
tblVehicleEF	LDT1	0.01	7.5760e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.54	1.52
tblVehicleEF	LDT1	3.61	2.38
tblVehicleEF	LDT1	313.68	312.60
tblVehicleEF	LDT1	70.93	65.25
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.26	0.42
tblVehicleEF	LDT1	3.1570e-003	3.0930e-003
tblVehicleEF	LDT1	7.7300e-004	6.4600e-004
tblVehicleEF	LDT1	0.18	0.86

tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.28	0.46
tblVehicleEF	LDT1	0.02	8.4640e-003
tblVehicleEF	LDT1	0.02	0.07
tblVehicleEF	LDT1	1.85	1.80
tblVehicleEF	LDT1	2.97	2.00
tblVehicleEF	LDT1	341.75	335.30
tblVehicleEF	LDT1	70.93	64.44
tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.20	0.28
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.21	0.36
tblVehicleEF	LDT1	3.4420e-003	3.3180e-003
tblVehicleEF	LDT1	7.6200e-004	6.3800e-004
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31

tblVehicleEF	LDT1	0.27	1.16
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.23	0.40
tblVehicleEF	LDT1	0.01	7.4310e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.47	1.46
tblVehicleEF	LDT1	3.55	2.39
tblVehicleEF	LDT1	307.06	308.38
tblVehicleEF	LDT1	70.93	65.27
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.21	0.29
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.25	0.43
tblVehicleEF	LDT1	3.0890e-003	3.0520e-003
tblVehicleEF	LDT1	7.7200e-004	6.4600e-004
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tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.58

tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.28	0.47
tblVehicleEF	LDT2	6.3270e-003	4.4090e-003
tblVehicleEF	LDT2	8.1990e-003	0.07
tblVehicleEF	LDT2	0.80	1.00
tblVehicleEF	LDT2	1.67	2.71
tblVehicleEF	LDT2	351.15	333.43
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tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
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tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.11	0.33
tblVehicleEF	LDT2	3.5180e-003	3.2990e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
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tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03

tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.12	0.36
tblVehicleEF	LDT2	7.1840e-003	4.9540e-003
tblVehicleEF	LDT2	6.8290e-003	0.06
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tblVehicleEF	LDT2	1.38	2.28
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tblVehicleEF	LDT2	79.39	69.05
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.13	0.28
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
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tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
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tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8420e-003	3.5160e-003
tblVehicleEF	LDT2	8.1700e-004	6.8300e-004
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tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.45

tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	6.1560e-003	4.3220e-003
tblVehicleEF	LDT2	8.1410e-003	0.07
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tblVehicleEF	LDT2	79.39	69.92
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.14	0.30
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tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	3.4410e-003	3.2580e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.12	0.37

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tblVehicleEF	LHD1	0.01	9.3750e-003
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tblVehicleEF	LHD1	1.8240e-003	0.02
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tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.27	0.07

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tblVehicleEF	LHD1	5.9760e-003	6.3570e-003
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tblVehicleEF	LHD1	0.02	0.40
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tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.35	0.50
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tblVehicleEF	LHD1	5.2170e-003	0.07
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tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	0.25	0.07
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tblVehicleEF	LHD1	0.36	0.50
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tblVehicleEF	LHD1	4.0430e-003	0.04
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tblVehicleEF	LHD2	4.6110e-003	4.1040e-003
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tblVehicleEF	LHD2	1.20	0.57
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.45
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tblVehicleEF	LHD2	1.49	1.36
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tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
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tblVehicleEF	LHD2	1.3070e-003	0.02
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tblVehicleEF	LHD2	0.01	0.23
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tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
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tblVehicleEF	LHD2	0.02	0.31
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tblVehicleEF	LHD2	0.12	0.05
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tblVehicleEF	LHD2	24.46	7.40
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tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.5220e-003	0.02
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tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
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tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.05
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tblVehicleEF	LHD2	4.6180e-003	4.1080e-003
tblVehicleEF	LHD2	8.0640e-003	8.8340e-003
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tblVehicleEF	LHD2	1.19	0.57
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tblVehicleEF	LHD2	24.46	7.44
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tblVehicleEF	LHD2	0.52	0.19
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
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tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
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tblVehicleEF	LHD2	6.8700e-004	0.01
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tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.11	0.04
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tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
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tblVehicleEF	LHD2	1.3460e-003	0.02

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tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.43	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	20.55	19.26
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tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.23	2.33
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.16	1.84
tblVehicleEF	MCY	2.0770e-003	2.0980e-003
tblVehicleEF	MCY	6.9000e-004	6.0100e-004

tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.74	2.87
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.35	2.01
tblVehicleEF	MCY	0.00	2.28
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	20.68	19.28
tblVehicleEF	MCY	9.05	7.90
tblVehicleEF	MCY	167.73	211.90
tblVehicleEF	MCY	46.45	58.88
tblVehicleEF	MCY	0.99	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.17	2.28
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	1.86	1.62
tblVehicleEF	MCY	2.0770e-003	2.0970e-003
tblVehicleEF	MCY	6.6700e-004	5.8300e-004

tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.67	2.81
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	2.02	1.76
tblVehicleEF	MCY	0.00	2.31
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.63	18.76
tblVehicleEF	MCY	9.55	8.44
tblVehicleEF	MCY	167.73	211.17
tblVehicleEF	MCY	46.45	60.38
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.19	2.31
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.08	1.81
tblVehicleEF	MCY	2.0610e-003	2.0900e-003
tblVehicleEF	MCY	6.8200e-004	5.9800e-004

tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.69	2.84
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.27	1.98
tblVehicleEF	MDV	0.01	5.5200e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.35	1.13
tblVehicleEF	MDV	3.25	3.24
tblVehicleEF	MDV	483.94	412.47
tblVehicleEF	MDV	107.92	86.64
tblVehicleEF	MDV	0.17	0.11
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.8500e-003	4.0780e-003
tblVehicleEF	MDV	1.1370e-003	8.5700e-004
tblVehicleEF	MDV	0.10	0.52

tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	0.01	6.2110e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.64	1.35
tblVehicleEF	MDV	2.69	2.71
tblVehicleEF	MDV	526.85	435.67
tblVehicleEF	MDV	107.92	85.59
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.30	0.35
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.03
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	5.2830e-003	4.3080e-003
tblVehicleEF	MDV	1.1260e-003	8.4700e-004
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19

tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.23	0.41
tblVehicleEF	MDV	0.01	5.4050e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.28	1.09
tblVehicleEF	MDV	3.20	3.25
tblVehicleEF	MDV	473.93	408.15
tblVehicleEF	MDV	107.92	86.67
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.7490e-003	4.0360e-003
tblVehicleEF	MDV	1.1360e-003	8.5800e-004
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45

tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.27	0.48
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.07	1.31
tblVehicleEF	MH	6.43	2.11
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.89
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tblVehicleEF	MH	0.91	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0700e-004	1.8700e-004
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07

tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.14	0.09
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.19	1.34
tblVehicleEF	MH	5.84	1.97
tblVehicleEF	MH	1,045.05	1,487.74
tblVehicleEF	MH	59.49	18.64
tblVehicleEF	MH	1.41	1.37
tblVehicleEF	MH	0.86	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.34	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9700e-004	1.8400e-004
tblVehicleEF	MH	2.91	0.20

tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.38	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.08	1.31
tblVehicleEF	MH	6.36	2.12
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.90
tblVehicleEF	MH	1.51	1.45
tblVehicleEF	MH	0.89	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.8700e-004

tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5160e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9450e-003
tblVehicleEF	MHD	0.32	3.17
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.32	0.34
tblVehicleEF	MHD	156.91	758.35
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89
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tblVehicleEF	MHD	0.99	1.61
tblVehicleEF	MHD	11.88	1.62
tblVehicleEF	MHD	3.8600e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.6900e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.02	0.16

tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02
tblVehicleEF	MHD	1.5080e-003	7.1830e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1700e-004	2.9000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5800e-003	3.3450e-003
tblVehicleEF	MHD	0.05	2.8280e-003
tblVehicleEF	MHD	0.24	2.75
tblVehicleEF	MHD	0.28	0.33
tblVehicleEF	MHD	4.97	0.32
tblVehicleEF	MHD	166.20	765.37
tblVehicleEF	MHD	1,101.52	974.58
tblVehicleEF	MHD	52.43	2.86
tblVehicleEF	MHD	0.62	5.74
tblVehicleEF	MHD	0.92	1.52
tblVehicleEF	MHD	11.85	1.62
tblVehicleEF	MHD	3.2500e-004	0.01

tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.1100e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.02	0.15
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.30	0.01
tblVehicleEF	MHD	1.5950e-003	7.2500e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1100e-004	2.8000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.33	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	3.5220e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9240e-003
tblVehicleEF	MHD	0.45	3.76
tblVehicleEF	MHD	0.27	0.32

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tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89
tblVehicleEF	MHD	0.57	5.74
tblVehicleEF	MHD	0.97	1.59
tblVehicleEF	MHD	11.87	1.62
tblVehicleEF	MHD	4.7000e-004	0.02
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	4.4900e-004	0.02
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.03	0.16
tblVehicleEF	MHD	6.4000e-004	2.2230e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02
tblVehicleEF	MHD	1.3860e-003	7.0900e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1600e-004	2.9000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.04	0.21
tblVehicleEF	MHD	6.4000e-004	2.2230e-003

tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
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tblVehicleEF	OBUS	9.9110e-003	6.5960e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	9.35
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.27	1.60
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tblVehicleEF	OBUS	0.97	1.24
tblVehicleEF	OBUS	1.93	1.14
tblVehicleEF	OBUS	6.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	6.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.85
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.19

tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.8400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1700e-004	1.3200e-004
tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.09
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.42	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	0.01	6.7350e-003
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tblVehicleEF	OBUS	0.26	9.12
tblVehicleEF	OBUS	0.65	0.79
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tblVehicleEF	OBUS	0.29	7.27
tblVehicleEF	OBUS	0.90	1.16
tblVehicleEF	OBUS	1.88	1.13
tblVehicleEF	OBUS	5.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	5.1000e-005	0.01

tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.87
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.36	0.07
tblVehicleEF	OBUS	7.1400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0800e-004	1.3000e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.11
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.40	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	9.9380e-003	6.6000e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	9.66
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.22	1.60
tblVehicleEF	OBUS	66.00	1,531.82
tblVehicleEF	OBUS	1,121.50	1,406.90

tblVehicleEF	OBUS	70.70	13.38
tblVehicleEF	OBUS	0.27	7.69
tblVehicleEF	OBUS	0.96	1.22
tblVehicleEF	OBUS	1.91	1.14
tblVehicleEF	OBUS	7.7000e-005	0.02
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	7.4000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.83
tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.4200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1600e-004	1.3200e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.07
tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.42	0.08

tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5840e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.71	29.13
tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.33	2.53
tblVehicleEF	SBUS	1,258.13	3,306.59
tblVehicleEF	SBUS	1,136.31	1,112.17
tblVehicleEF	SBUS	37.11	14.75
tblVehicleEF	SBUS	11.70	29.52
tblVehicleEF	SBUS	4.77	5.20
tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9260e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.27	0.11

tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6300e-004	1.4600e-004
tblVehicleEF	SBUS	2.9260e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.30	0.12
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.7140e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.56	28.79
tblVehicleEF	SBUS	0.66	0.80
tblVehicleEF	SBUS	3.65	1.83
tblVehicleEF	SBUS	1,322.00	3,377.53
tblVehicleEF	SBUS	1,136.31	1,112.20
tblVehicleEF	SBUS	37.11	13.58
tblVehicleEF	SBUS	12.08	30.14
tblVehicleEF	SBUS	4.47	4.88
tblVehicleEF	SBUS	14.99	0.82
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	9.6490e-003	0.03

tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	5.6170e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.37
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.22	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.3500e-004	1.3400e-004
tblVehicleEF	SBUS	5.6170e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.24	0.10
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5760e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.91	29.60
tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.37	2.65
tblVehicleEF	SBUS	1,169.92	3,208.62

tblVehicleEF	SBUS	1,136.31	1,112.17
tblVehicleEF	SBUS	37.11	14.94
tblVehicleEF	SBUS	11.19	28.66
tblVehicleEF	SBUS	4.69	5.12
tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6400e-004	1.4800e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.98	4.87
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003

tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	9.1680e-003
tblVehicleEF	UBUS	9.26	34.75
tblVehicleEF	UBUS	14.34	0.80
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.61
tblVehicleEF	UBUS	5.87	0.38
tblVehicleEF	UBUS	13.57	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.15	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6240e-003	1.0500e-004

tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.25	0.04
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	8.3240e-003
tblVehicleEF	UBUS	9.36	34.75
tblVehicleEF	UBUS	11.74	0.68
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.41
tblVehicleEF	UBUS	5.45	0.38
tblVehicleEF	UBUS	13.45	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	0.62	0.07
tblVehicleEF	UBUS	0.02	0.04

tblVehicleEF	UBUS	1.02	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.5790e-003	1.0300e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	2.52	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.12	0.03
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	9.2430e-003
tblVehicleEF	UBUS	9.27	34.75
tblVehicleEF	UBUS	13.86	0.81
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.63
tblVehicleEF	UBUS	5.76	0.38
tblVehicleEF	UBUS	13.55	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003

tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.13	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6160e-003	1.0500e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.24	0.04
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32
tblWoodstoves	NumberCatalytic	10.45	0.00
tblWoodstoves	NumberNoncatalytic	10.45	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	11.9446	40.5566	40.1343	0.0776	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	7,557.7206	7,557.7206	1.4463	0.0000	7,593.8785
2022	11.5155	30.7164	39.2637	0.0769	2.3205	1.4753	3.7959	0.6186	1.3808	1.9994	0.0000	7,485.1904	7,485.1904	1.4345	0.0000	7,521.0526
Maximum	**11.9446**	**40.5566**	**40.1343**	**0.0776**	**18.2675**	**2.0458**	**20.3132**	**9.9840**	**1.8821**	**11.8661**	**0.0000**	**7,557.7206**	**7,557.7206**	**1.4463**	**0.0000**	**7,593.8785**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	11.9446	40.5566	40.1343	0.0776	6.8843	2.0458	8.9300	3.7301	1.8821	5.6122	0.0000	7,557.7206	7,557.7206	1.4463	0.0000	7,593.8784
2022	11.5155	30.7164	39.2637	0.0769	2.2008	1.4753	3.6761	0.5892	1.3808	1.9701	0.0000	7,485.1904	7,485.1904	1.4345	0.0000	7,521.0526
Maximum	**11.9446**	**40.5566**	**40.1343**	**0.0776**	**6.8843**	**2.0458**	**8.9300**	**3.7301**	**1.8821**	**5.6122**	**0.0000**	**7,557.7206**	**7,557.7206**	**1.4463**	**0.0000**	**7,593.8784**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**55.87**	**0.00**	**47.71**	**59.26**	**0.00**	**45.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3627	3.1460	18.5153	0.0197		0.3336	0.3336		0.3336	0.3336	0.0000	3,793.0475	3,793.0475	0.1021	0.0690	3,816.1520
Energy	0.0962	0.8219	0.3497	5.2500e-003		0.0665	0.0665		0.0665	0.0665		1,049.1766	1,049.1766	0.0201	0.0192	1,055.4114
Mobile	6.4713	26.1597	51.0716	0.1454	11.1236	0.1491	11.2727	2.9728	0.1490	3.1219		15,247.4630	15,247.4630	0.9524		15,271.2721
Total	**11.9302**	**30.1275**	**69.9367**	**0.1704**	**11.1236**	**0.5492**	**11.6727**	**2.9728**	**0.5491**	**3.5220**	**0.0000**	**20,089.6870**	**20,089.6870**	**1.0745**	**0.0882**	**20,142.8354**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.0179	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954	0.0000	31.0475	31.0475	0.0300	0.0000	31.7963
Energy	0.0649	0.5549	0.2361	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.4049	708.4049	0.0136	0.0130	712.6146
Mobile	6.4713	26.1597	51.0716	0.1454	11.1236	0.1491	11.2727	2.9728	0.1490	3.1219		15,247.4630	15,247.4630	0.9524		15,271.2721
Total	**11.5541**	**26.9137**	**68.5691**	**0.1499**	**11.1236**	**0.2893**	**11.4129**	**2.9728**	**0.2893**	**3.2621**	**0.0000**	**15,986.9153**	**15,986.9153**	**0.9959**	**0.0130**	**16,015.6830**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.15**	**10.67**	**1.96**	**12.04**	**0.00**	**47.31**	**2.23**	**0.00**	**47.32**	**7.38**	**0.00**	**20.42**	**20.42**	**7.32**	**85.27**	**20.49**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	6/1/2021	1/28/2022	5	174	
6	Architectural Coating	Architectural Coating	6/1/2021	1/28/2022	5	174	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 423,225; Residential Outdoor: 141,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Sierra Casa Grande - Mango Ave - Replacement Site - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	115.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	150.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2403	0.0000	1.2403	0.1878	0.0000	0.1878			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**1.2403**	**1.5513**	**2.7916**	**0.1878**	**1.4411**	**1.6289**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0357	1.3164	0.2320	4.3500e-003	0.1006	3.7600e-003	0.1044	0.0276	3.6000e-003	0.0312		462.0492	462.0492	0.0276		462.7397
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.1121**	**1.3660**	**0.7413**	**5.8300e-003**	**0.2683**	**4.8300e-003**	**0.2731**	**0.0721**	**4.5900e-003**	**0.0766**		**609.2738**	**609.2738**	**0.0317**		**610.0668**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4595	0.0000	0.4595	0.0696	0.0000	0.0696			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.4595**	**1.5513**	**2.0109**	**0.0696**	**1.4411**	**1.5107**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0357	1.3164	0.2320	4.3500e-003	0.0961	3.7600e-003	0.0998	0.0265	3.6000e-003	0.0301		462.0492	462.0492	0.0276		462.7397
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.1121**	**1.3660**	**0.7413**	**5.8300e-003**	**0.2550**	**4.8300e-003**	**0.2598**	**0.0688**	**4.5900e-003**	**0.0734**		**609.2738**	**609.2738**	**0.0317**		**610.0668**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0917	0.0595	0.6112	1.7700e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		176.6696	176.6696	4.9200e-003		176.7925
Total	**0.0917**	**0.0595**	**0.6112**	**1.7700e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0545**		**176.6696**	**176.6696**	**4.9200e-003**		**176.7925**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6936	0.0000	6.6936	3.6793	0.0000	3.6793			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**6.6936**	**2.0445**	**8.7380**	**3.6793**	**1.8809**	**5.5602**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0917	0.0595	0.6112	1.7700e-003	0.1907	1.2900e-003	0.1920	0.0508	1.1900e-003	0.0520		176.6696	176.6696	4.9200e-003		176.7925
Total	**0.0917**	**0.0595**	**0.6112**	**1.7700e-003**	**0.1907**	**1.2900e-003**	**0.1920**	**0.0508**	**1.1900e-003**	**0.0520**		**176.6696**	**176.6696**	**4.9200e-003**		**176.7925**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5523**	**1.1599**	**7.7123**	**3.3675**	**1.0671**	**4.4346**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4276	0.0000	2.4276	1.2477	0.0000	1.2477			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**2.4276**	**1.1599**	**3.5876**	**1.2477**	**1.0671**	**2.3148**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0604	2.0990	0.4670	5.7100e-003	0.1409	3.7400e-003	0.1446	0.0406	3.5800e-003	0.0442		601.7773	601.7773	0.0439		602.8737
Worker	0.7638	0.4955	5.0934	0.0148	1.6767	0.0107	1.6874	0.4447	9.8800e-003	0.4545		1,472.2465	1,472.2465	0.0410		1,473.2710
Total	**0.8242**	**2.5945**	**5.5604**	**0.0205**	**1.8176**	**0.0145**	**1.8320**	**0.4852**	**0.0135**	**0.4987**		**2,074.0238**	**2,074.0238**	**0.0848**		**2,076.1447**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0604	2.0990	0.4670	5.7100e-003	0.1349	3.7400e-003	0.1386	0.0391	3.5800e-003	0.0427		601.7773	601.7773	0.0439		602.8737
Worker	0.7638	0.4955	5.0934	0.0148	1.5892	0.0107	1.5999	0.4232	9.8800e-003	0.4331		1,472.2465	1,472.2465	0.0410		1,473.2710
Total	**0.8242**	**2.5945**	**5.5604**	**0.0205**	**1.7241**	**0.0145**	**1.7385**	**0.4623**	**0.0135**	**0.4757**		**2,074.0238**	**2,074.0238**	**0.0848**		**2,076.1447**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0563	1.9885	0.4335	5.6600e-003	0.1409	3.1500e-003	0.1441	0.0406	3.0100e-003	0.0436		596.7638	596.7638	0.0424		597.8238
Worker	0.7151	0.4453	4.6713	0.0142	1.6767	0.0104	1.6871	0.4447	9.5900e-003	0.4542		1,419.2190	1,419.2190	0.0368		1,420.1385
Total	**0.7715**	**2.4338**	**5.1048**	**0.0199**	**1.8176**	**0.0136**	**1.8311**	**0.4852**	**0.0126**	**0.4978**		**2,015.9827**	**2,015.9827**	**0.0792**		**2,017.9623**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0563	1.9885	0.4335	5.6600e-003	0.1349	3.1500e-003	0.1380	0.0391	3.0100e-003	0.0421		596.7638	596.7638	0.0424		597.8238
Worker	0.7151	0.4453	4.6713	0.0142	1.5892	0.0104	1.5996	0.4232	9.5900e-003	0.4328		1,419.2190	1,419.2190	0.0368		1,420.1385
Total	**0.7715**	**2.4338**	**5.1048**	**0.0199**	**1.7241**	**0.0136**	**1.7376**	**0.4623**	**0.0126**	**0.4749**		**2,015.9827**	**2,015.9827**	**0.0792**		**2,017.9623**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0445	0.4671	1.4200e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		141.9219	141.9219	3.6800e-003		142.0139
Total	**0.0715**	**0.0445**	**0.4671**	**1.4200e-003**	**0.1677**	**1.0400e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**141.9219**	**141.9219**	**3.6800e-003**		**142.0139**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0445	0.4671	1.4200e-003	0.1589	1.0400e-003	0.1600	0.0423	9.6000e-004	0.0433		141.9219	141.9219	3.6800e-003		142.0139
Total	**0.0715**	**0.0445**	**0.4671**	**1.4200e-003**	**0.1589**	**1.0400e-003**	**0.1600**	**0.0423**	**9.6000e-004**	**0.0433**		**141.9219**	**141.9219**	**3.6800e-003**		**142.0139**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**7.7348**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1528	0.0991	1.0187	2.9600e-003	0.3353	2.1400e-003	0.3375	0.0889	1.9800e-003	0.0909		294.4493	294.4493	8.2000e-003		294.6542
Total	**0.1528**	**0.0991**	**1.0187**	**2.9600e-003**	**0.3353**	**2.1400e-003**	**0.3375**	**0.0889**	**1.9800e-003**	**0.0909**		**294.4493**	**294.4493**	**8.2000e-003**		**294.6542**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**7.7348**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1528	0.0991	1.0187	2.9600e-003	0.3178	2.1400e-003	0.3200	0.0846	1.9800e-003	0.0866		294.4493	294.4493	8.2000e-003		294.6542
Total	**0.1528**	**0.0991**	**1.0187**	**2.9600e-003**	**0.3178**	**2.1400e-003**	**0.3200**	**0.0846**	**1.9800e-003**	**0.0866**		**294.4493**	**294.4493**	**8.2000e-003**		**294.6542**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**7.7204**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1430	0.0891	0.9343	2.8500e-003	0.3353	2.0800e-003	0.3374	0.0889	1.9200e-003	0.0909		283.8438	283.8438	7.3600e-003		284.0277
Total	**0.1430**	**0.0891**	**0.9343**	**2.8500e-003**	**0.3353**	**2.0800e-003**	**0.3374**	**0.0889**	**1.9200e-003**	**0.0909**		**283.8438**	**283.8438**	**7.3600e-003**		**284.0277**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.5159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**7.7204**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1430	0.0891	0.9343	2.8500e-003	0.3178	2.0800e-003	0.3199	0.0846	1.9200e-003	0.0866		283.8438	283.8438	7.3600e-003		284.0277
Total	**0.1430**	**0.0891**	**0.9343**	**2.8500e-003**	**0.3178**	**2.0800e-003**	**0.3199**	**0.0846**	**1.9200e-003**	**0.0866**		**283.8438**	**283.8438**	**7.3600e-003**		**284.0277**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.4713	26.1597	51.0716	0.1454	11.1236	0.1491	11.2727	2.9728	0.1490	3.1219		15,247.4630	15,247.4630	0.9524		15,271.2721
Unmitigated	6.4713	26.1597	51.0716	0.1454	11.1236	0.1491	11.2727	2.9728	0.1490	3.1219		15,247.4630	15,247.4630	0.9524		15,271.2721

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,529.88	1,529.88	1529.88	5,227,832	5,227,832
Total	1,529.88	1,529.88	1,529.88	5,227,832	5,227,832

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0649	0.5549	0.2361	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.4049	708.4049	0.0136	0.0130	712.6146
NaturalGas Unmitigated	0.0962	0.8219	0.3497	5.2500e-003		0.0665	0.0665		0.0665	0.0665		1,049.1766	1,049.1766	0.0201	0.0192	1,055.4114

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	8918	0.0962	0.8219	0.3497	5.2500e-003		0.0665	0.0665		0.0665	0.0665		1,049.1766	1,049.1766	0.0201	0.0192	1,055.4114
Total		**0.0962**	**0.8219**	**0.3497**	**5.2500e-003**		**0.0665**	**0.0665**		**0.0665**	**0.0665**		**1,049.1766**	**1,049.1766**	**0.0201**	**0.0192**	**1,055.4114**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6.02144	0.0649	0.5549	0.2361	3.5400e-003		0.0449	0.0449		0.0449	0.0449		708.4049	708.4049	0.0136	0.0130	712.6146
Total		**0.0649**	**0.5549**	**0.2361**	**3.5400e-003**		**0.0449**	**0.0449**		**0.0449**	**0.0449**		**708.4049**	**708.4049**	**0.0136**	**0.0130**	**712.6146**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.0179	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954	0.0000	31.0475	31.0475	0.0300	0.0000	31.7963
Unmitigated	5.3627	3.1460	18.5153	0.0197		0.3336	0.3336		0.3336	0.3336	0.0000	3,793.0475	3,793.0475	0.1021	0.0690	3,816.1520

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.3449	2.9469	1.2540	0.0188		0.2383	0.2383		0.2383	0.2383	0.0000	3,762.0000	3,762.0000	0.0721	0.0690	3,784.3557
Landscaping	0.5214	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954		31.0475	31.0475	0.0300		31.7963
Total	**5.3627**	**3.1460**	**18.5153**	**0.0197**		**0.3336**	**0.3336**		**0.3336**	**0.3336**	**0.0000**	**3,793.0475**	**3,793.0475**	**0.1021**	**0.0690**	**3,816.1520**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3583					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.1382					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5214	0.1991	17.2613	9.1000e-004		0.0954	0.0954		0.0954	0.0954		31.0475	31.0475	0.0300		31.7963
Total	**5.0179**	**0.1991**	**17.2613**	**9.1000e-004**		**0.0954**	**0.0954**		**0.0954**	**0.0954**	**0.0000**	**31.0475**	**31.0475**	**0.0300**	**0.0000**	**31.7963**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Mango Ave - Replacement Site

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	209.00	Dwelling Unit	5.69	209,000.00	598

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Mango Ave - Replacement Site - San Bernardino-South Coast County, Annual

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - based on Traffic Memo, lot size is 5.69 acres

Construction Phase - Building Construction, Paving, and Architectural Coating activities are expected to overlap.

Demolition - default squarefootage determined for existing site based on 14 single family units

Architectural Coating -

Vehicle Trips - Based on Traffic Memo, 7.32, CalEEMod trip % error

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Woodstoves - No wood burning per SCAQMD 445

Area Coating -

Energy Use -

Construction Off-road Equipment Mitigation - RULE 402

Area Mitigation -

Energy Mitigation - CEC - homes built under 2019 standards will use about 53% less energy than those under the 2016 standard

Water Mitigation - Low flow fixtures

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	174.00
tblConstructionPhase	NumDays	20.00	174.00
tblFireplaces	NumberWood	10.45	0.00
tblLandUse	LotAcreage	13.06	5.69
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44

tblVehicleEF	HHD	1.21	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.29	60.12
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.82	1.3410e-003
tblVehicleEF	HHD	6,933.41	11,330.49
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	26.50	61.17
tblVehicleEF	HHD	2.50	3.42
tblVehicleEF	HHD	20.21	2.11
tblVehicleEF	HHD	9.7780e-003	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	9.3550e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.84	4.41
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.08	0.08

tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.97	5.05
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.14	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.39	58.80
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.70	1.2660e-003
tblVehicleEF	HHD	7,345.18	11,296.84
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	27.35	59.38
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tblVehicleEF	HHD	0.04	0.04

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tblVehicleEF	HHD	0.04	0.14
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tblVehicleEF	HHD	0.06	0.06
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tblVehicleEF	HHD	0.01	0.03
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tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
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tblVehicleEF	HHD	2.3300e-004	2.9300e-004
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tblVehicleEF	HHD	0.06	0.11

tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.5000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
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tblVehicleEF	LDA	0.08	0.22

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tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.21
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tblVehicleEF	LDA	0.06	0.19
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tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.07	0.21
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tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
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tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	9.3400e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.22
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tblVehicleEF	LDA	5.9100e-004	5.3300e-004

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tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.24
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tblVehicleEF	LDT1	3.61	2.38
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tblVehicleEF	LDT1	70.93	65.25
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.26	0.42
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tblVehicleEF	LDT1	7.7300e-004	6.4600e-004
tblVehicleEF	LDT1	0.18	0.86

tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.28	0.46
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tblVehicleEF	LDT1	0.03	0.03
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tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.58

tblVehicleEF	LDT1	0.05	0.05
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tblVehicleEF	LDT2	1.67	2.71
tblVehicleEF	LDT2	351.15	333.43
tblVehicleEF	LDT2	79.39	69.90
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.14	0.30
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tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
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tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
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tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.11	0.33
tblVehicleEF	LDT2	3.5180e-003	3.2990e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03

tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.12	0.36
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tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.13	0.28
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tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
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tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.09	0.29
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tblVehicleEF	LDT2	8.1700e-004	6.8300e-004
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.45

tblVehicleEF	LDT2	0.10	0.31
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tblVehicleEF	LDT2	79.39	69.92
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.14	0.30
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tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
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tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.53
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tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
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tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.12	0.37

tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.1020e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42
tblVehicleEF	LHD1	1.07	0.75
tblVehicleEF	LHD1	2.60	0.93
tblVehicleEF	LHD1	9.23	128.40
tblVehicleEF	LHD1	609.20	652.45
tblVehicleEF	LHD1	30.40	10.08
tblVehicleEF	LHD1	0.09	1.05
tblVehicleEF	LHD1	2.12	1.25
tblVehicleEF	LHD1	0.99	0.29
tblVehicleEF	LHD1	9.6500e-004	0.01
tblVehicleEF	LHD1	0.01	9.8770e-003
tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	3.7070e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.27	0.07

tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9760e-003	6.3570e-003
tblVehicleEF	LHD1	3.5300e-004	1.0000e-004
tblVehicleEF	LHD1	3.7070e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.2280e-003
tblVehicleEF	LHD1	0.02	0.01
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tblVehicleEF	LHD1	1.09	0.76
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tblVehicleEF	LHD1	9.23	128.40
tblVehicleEF	LHD1	609.20	652.47
tblVehicleEF	LHD1	30.40	10.00
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tblVehicleEF	LHD1	1.98	1.17
tblVehicleEF	LHD1	0.94	0.28
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tblVehicleEF	LHD1	0.01	9.8770e-003
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tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01

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tblVehicleEF	LHD1	7.3080e-003	0.07
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.29
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tblVehicleEF	LHD1	0.25	0.07
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tblVehicleEF	LHD1	0.36	0.50
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tblVehicleEF	LHD1	0.01	9.8770e-003
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tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
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tblVehicleEF	LHD1	0.02	0.29
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tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
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tblVehicleEF	LHD1	3.5200e-004	1.0000e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.7940e-003	0.02

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tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6110e-003	4.1040e-003
tblVehicleEF	LHD2	8.1370e-003	8.8770e-003
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3070e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.23
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tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
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tblVehicleEF	LHD2	1.3070e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	7.0300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
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tblVehicleEF	LHD2	4.6760e-003	4.1460e-003
tblVehicleEF	LHD2	7.7630e-003	8.5350e-003
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tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.13	0.54
tblVehicleEF	LHD2	14.27	191.37
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tblVehicleEF	LHD2	24.46	7.40
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.40	1.28
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tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
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tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
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tblVehicleEF	LHD2	2.6500e-004	7.3000e-005
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tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
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tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.05
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tblVehicleEF	LHD2	8.0640e-003	8.8340e-003
tblVehicleEF	LHD2	0.12	1.89

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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
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tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
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tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3460e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
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tblVehicleEF	LHD2	1.3460e-003	0.02

tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.43	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	20.55	19.26
tblVehicleEF	MCY	9.93	8.60
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tblVehicleEF	MCY	1.16	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
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tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.23	2.33
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.16	1.84
tblVehicleEF	MCY	2.0770e-003	2.0980e-003
tblVehicleEF	MCY	6.9000e-004	6.0100e-004

tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.74	2.87
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.35	2.01
tblVehicleEF	MCY	0.00	2.28
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	20.68	19.28
tblVehicleEF	MCY	9.05	7.90
tblVehicleEF	MCY	167.73	211.90
tblVehicleEF	MCY	46.45	58.88
tblVehicleEF	MCY	0.99	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.17	2.28
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	1.86	1.62
tblVehicleEF	MCY	2.0770e-003	2.0970e-003
tblVehicleEF	MCY	6.6700e-004	5.8300e-004

tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.67	2.81
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	2.02	1.76
tblVehicleEF	MCY	0.00	2.31
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.63	18.76
tblVehicleEF	MCY	9.55	8.44
tblVehicleEF	MCY	167.73	211.17
tblVehicleEF	MCY	46.45	60.38
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.19	2.31
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.08	1.81
tblVehicleEF	MCY	2.0610e-003	2.0900e-003
tblVehicleEF	MCY	6.8200e-004	5.9800e-004

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tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.69	2.84
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.27	1.98
tblVehicleEF	MDV	0.01	5.5200e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.35	1.13
tblVehicleEF	MDV	3.25	3.24
tblVehicleEF	MDV	483.94	412.47
tblVehicleEF	MDV	107.92	86.64
tblVehicleEF	MDV	0.17	0.11
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.8500e-003	4.0780e-003
tblVehicleEF	MDV	1.1370e-003	8.5700e-004
tblVehicleEF	MDV	0.10	0.52

tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	0.01	6.2110e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.64	1.35
tblVehicleEF	MDV	2.69	2.71
tblVehicleEF	MDV	526.85	435.67
tblVehicleEF	MDV	107.92	85.59
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.30	0.35
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.03
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	5.2830e-003	4.3080e-003
tblVehicleEF	MDV	1.1260e-003	8.4700e-004
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19

tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.23	0.41
tblVehicleEF	MDV	0.01	5.4050e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.28	1.09
tblVehicleEF	MDV	3.20	3.25
tblVehicleEF	MDV	473.93	408.15
tblVehicleEF	MDV	107.92	86.67
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.7490e-003	4.0360e-003
tblVehicleEF	MDV	1.1360e-003	8.5800e-004
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45

tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.27	0.48
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.07	1.31
tblVehicleEF	MH	6.43	2.11
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.89
tblVehicleEF	MH	1.54	1.48
tblVehicleEF	MH	0.91	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0700e-004	1.8700e-004
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07

tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.14	0.09
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.19	1.34
tblVehicleEF	MH	5.84	1.97
tblVehicleEF	MH	1,045.05	1,487.74
tblVehicleEF	MH	59.49	18.64
tblVehicleEF	MH	1.41	1.37
tblVehicleEF	MH	0.86	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
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tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.34	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9700e-004	1.8400e-004
tblVehicleEF	MH	2.91	0.20

tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.38	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.08	1.31
tblVehicleEF	MH	6.36	2.12
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tblVehicleEF	MH	0.89	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
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tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.8700e-004

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tblVehicleEF	MH	0.53	0.04
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tblVehicleEF	MHD	0.02	0.16

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tblVehicleEF	MHD	6.1700e-004	2.9000e-005
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tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	11.85	1.62
tblVehicleEF	MHD	3.2500e-004	0.01

tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.1100e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.02	0.15
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1100e-004	2.8000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
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tblVehicleEF	MHD	0.33	0.02
tblVehicleEF	MHD	0.02	0.03
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tblVehicleEF	MHD	0.01	9.2620e-003
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tblVehicleEF	OBUS	4.6440e-003	0.01
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tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
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tblVehicleEF	OBUS	9.3100e-004	0.01
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tblVehicleEF	OBUS	9.3100e-004	0.01
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tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	5.1000e-005	0.01

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tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.15	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6240e-003	1.0500e-004

tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.25	0.04
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	8.3240e-003
tblVehicleEF	UBUS	9.36	34.75
tblVehicleEF	UBUS	11.74	0.68
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.41
tblVehicleEF	UBUS	5.45	0.38
tblVehicleEF	UBUS	13.45	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	0.62	0.07
tblVehicleEF	UBUS	0.02	0.04

tblVehicleEF	UBUS	1.02	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.5790e-003	1.0300e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	2.52	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.12	0.03
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	9.2430e-003
tblVehicleEF	UBUS	9.27	34.75
tblVehicleEF	UBUS	13.86	0.81
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.63
tblVehicleEF	UBUS	5.76	0.38
tblVehicleEF	UBUS	13.55	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003

tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.13	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6160e-003	1.0500e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.24	0.04
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32
tblWoodstoves	NumberCatalytic	10.45	0.00
tblWoodstoves	NumberNoncatalytic	10.45	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	1.0626	4.0133	4.2351	8.3200e-003	0.3988	0.1993	0.5980	0.1468	0.1861	0.3328	0.0000	735.1409	735.1409	0.1425	0.0000	738.7029
2022	0.1142	0.3079	0.3953	7.7000e-004	0.0228	0.0148	0.0375	6.0800e-003	0.0138	0.0199	0.0000	68.3987	68.3987	0.0130	0.0000	68.7238
Maximum	**1.0626**	**4.0133**	**4.2351**	**8.3200e-003**	**0.3988**	**0.1993**	**0.5980**	**0.1468**	**0.1861**	**0.3328**	**0.0000**	**735.1409**	**735.1409**	**0.1425**	**0.0000**	**738.7029**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	1.0626	4.0133	4.2351	8.3200e-003	0.2810	0.1993	0.4803	0.0902	0.1861	0.2763	0.0000	735.1403	735.1403	0.1425	0.0000	738.7023
2022	0.1142	0.3079	0.3953	7.7000e-004	0.0216	0.0148	0.0364	5.7900e-003	0.0138	0.0196	0.0000	68.3987	68.3987	0.0130	0.0000	68.7238
Maximum	**1.0626**	**4.0133**	**4.2351**	**8.3200e-003**	**0.2810**	**0.1993**	**0.4803**	**0.0902**	**0.1861**	**0.2763**	**0.0000**	**735.1403**	**735.1403**	**0.1425**	**0.0000**	**738.7023**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.21**	**0.00**	**18.71**	**37.18**	**0.00**	**16.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	1.0080	1.0080
2	4-4-2021	7-3-2021	1.0198	1.0198
3	7-4-2021	10-3-2021	1.5296	1.5296
4	10-4-2021	1-3-2022	1.5254	1.5254
5	1-4-2022	4-3-2022	0.3771	0.3771
		Highest	1.5296	1.5296

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8901	0.0617	2.1733	3.5000e-004		0.0149	0.0149		0.0149	0.0149	0.0000	46.1811	46.1811	4.2100e-003	7.8000e-004	46.5195
Energy	0.0176	0.1500	0.0638	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	408.8915	408.8915	0.0167	5.9500e-003	411.0817
Mobile	1.1729	4.6980	9.3853	0.0266	1.9866	0.0268	2.0135	0.5318	0.0269	0.5586	0.0000	2,531.9890	2,531.9890	0.1578	0.0000	2,535.9344
Waste						0.0000	0.0000		0.0000	0.0000	19.5156	0.0000	19.5156	1.1533	0.0000	48.3490
Water						0.0000	0.0000		0.0000	0.0000	4.3201	63.1355	67.4556	0.4473	0.0112	81.9815
Total	**2.0805**	**4.9097**	**11.6225**	**0.0279**	**1.9866**	**0.0539**	**2.0405**	**0.5318**	**0.0539**	**0.5857**	**23.8357**	**3,050.1971**	**3,074.0327**	**1.7794**	**0.0180**	**3,123.8660**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8858	0.0249	2.1577	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5207	3.5207	3.4000e-003	0.0000	3.6056
Energy	0.0119	0.1013	0.0431	6.5000e-004		8.1900e-003	8.1900e-003		8.1900e-003	8.1900e-003	0.0000	329.9772	329.9772	0.0143	4.6500e-003	331.7213
Mobile	1.1729	4.6980	9.3853	0.0266	1.9866	0.0268	2.0135	0.5318	0.0269	0.5586	0.0000	2,531.9890	2,531.9890	0.1578	0.0000	2,535.9344
Waste						0.0000	0.0000		0.0000	0.0000	19.5156	0.0000	19.5156	1.1533	0.0000	48.3490
Water						0.0000	0.0000		0.0000	0.0000	3.4561	53.5779	57.0340	0.3580	9.0100e-003	68.6698
Total	**2.0705**	**4.8242**	**11.5861**	**0.0274**	**1.9866**	**0.0469**	**2.0336**	**0.5318**	**0.0470**	**0.5787**	**22.9716**	**2,919.0647**	**2,942.0364**	**1.6869**	**0.0137**	**2,988.2801**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.48**	**1.74**	**0.31**	**1.97**	**0.00**	**12.85**	**0.34**	**0.00**	**12.84**	**1.18**	**3.62**	**4.30**	**4.29**	**5.20**	**23.90**	**4.34**

3.0 Construction Detail

Construction Phase

Sierra Casa Grande - Mango Ave - Replacement Site - San Bernardino-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	6/1/2021	1/28/2022	5	174	
6	Architectural Coating	Architectural Coating	6/1/2021	1/28/2022	5	174	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 423,225; Residential Outdoor: 141,075; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Sierra Casa Grande - Mango Ave - Replacement Site - San Bernardino-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	115.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	150.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0124	0.0000	0.0124	1.8800e-003	0.0000	1.8800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**0.0124**	**0.0155**	**0.0279**	**1.8800e-003**	**0.0144**	**0.0163**	**0.0000**	**34.0008**	**34.0008**	**9.5700e-003**	**0.0000**	**34.2400**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0134	2.1600e-003	4.0000e-005	9.9000e-004	4.0000e-005	1.0300e-003	2.7000e-004	4.0000e-005	3.1000e-004	0.0000	4.2571	4.2571	2.4000e-004	0.0000	4.2631
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**1.0400e-003**	**0.0140**	**7.5000e-003**	**6.0000e-005**	**2.6300e-003**	**5.0000e-005**	**2.6900e-003**	**7.1000e-004**	**5.0000e-005**	**7.6000e-004**	**0.0000**	**5.6219**	**5.6219**	**2.8000e-004**	**0.0000**	**5.6289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.6000e-003	0.0000	4.6000e-003	7.0000e-004	0.0000	7.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**4.6000e-003**	**0.0155**	**0.0201**	**7.0000e-004**	**0.0144**	**0.0151**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0134	2.1600e-003	4.0000e-005	9.4000e-004	4.0000e-005	9.8000e-004	2.6000e-004	4.0000e-005	3.0000e-004	0.0000	4.2571	4.2571	2.4000e-004	0.0000	4.2631
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**1.0400e-003**	**0.0140**	**7.5000e-003**	**6.0000e-005**	**2.5000e-003**	**5.0000e-005**	**2.5500e-003**	**6.8000e-004**	**5.0000e-005**	**7.3000e-004**	**0.0000**	**5.6219**	**5.6219**	**2.8000e-004**	**0.0000**	**5.6289**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.1000e-004	3.2100e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8189	0.8189	2.0000e-005	0.0000	0.8195
Total	**4.1000e-004**	**3.1000e-004**	**3.2100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8189**	**0.8189**	**2.0000e-005**	**0.0000**	**0.8195**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0335	0.0000	0.0335	0.0184	0.0000	0.0184	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0335**	**0.0102**	**0.0437**	**0.0184**	**9.4000e-003**	**0.0278**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.1000e-004	3.2100e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8189	0.8189	2.0000e-005	0.0000	0.8195
Total	**4.1000e-004**	**3.1000e-004**	**3.2100e-003**	**1.0000e-005**	**9.4000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8189**	**0.8189**	**2.0000e-005**	**0.0000**	**0.8195**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0655**	**0.0116**	**0.0771**	**0.0337**	**0.0107**	**0.0443**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2644**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**6.9000e-004**	**5.2000e-004**	**5.3400e-003**	**2.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3649**	**1.3649**	**4.0000e-005**	**0.0000**	**1.3658**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0243	0.0000	0.0243	0.0125	0.0000	0.0125	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0243**	**0.0116**	**0.0359**	**0.0125**	**0.0107**	**0.0232**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2643**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**6.9000e-004**	**5.2000e-004**	**5.3400e-003**	**2.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3649**	**1.3649**	**4.0000e-005**	**0.0000**	**1.3658**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1996	1.8304	1.7404	2.8300e-003		0.1007	0.1007		0.0946	0.0946	0.0000	243.2191	243.2191	0.0587	0.0000	244.6861
Total	**0.1996**	**1.8304**	**1.7404**	**2.8300e-003**		**0.1007**	**0.1007**		**0.0946**	**0.0946**	**0.0000**	**243.2191**	**243.2191**	**0.0587**	**0.0000**	**244.6861**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1200e-003	0.2247	0.0457	6.1000e-004	0.0146	3.9000e-004	0.0150	4.2000e-003	3.7000e-004	4.5700e-003	0.0000	58.6655	58.6655	3.9500e-003	0.0000	58.7643
Worker	0.0725	0.0548	0.5612	1.5900e-003	0.1727	1.1300e-003	0.1738	0.0459	1.0400e-003	0.0469	0.0000	143.3093	143.3093	4.0100e-003	0.0000	143.4096
Total	**0.0786**	**0.2795**	**0.6069**	**2.2000e-003**	**0.1873**	**1.5200e-003**	**0.1888**	**0.0501**	**1.4100e-003**	**0.0515**	**0.0000**	**201.9748**	**201.9748**	**7.9600e-003**	**0.0000**	**202.1740**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1996	1.8304	1.7404	2.8300e-003		0.1007	0.1007		0.0946	0.0946	0.0000	243.2189	243.2189	0.0587	0.0000	244.6858
Total	**0.1996**	**1.8304**	**1.7404**	**2.8300e-003**		**0.1007**	**0.1007**		**0.0946**	**0.0946**	**0.0000**	**243.2189**	**243.2189**	**0.0587**	**0.0000**	**244.6858**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1200e-003	0.2247	0.0457	6.1000e-004	0.0140	3.9000e-004	0.0143	4.0500e-003	3.7000e-004	4.4200e-003	0.0000	58.6655	58.6655	3.9500e-003	0.0000	58.7643
Worker	0.0725	0.0548	0.5612	1.5900e-003	0.1637	1.1300e-003	0.1648	0.0437	1.0400e-003	0.0447	0.0000	143.3093	143.3093	4.0100e-003	0.0000	143.4096
Total	**0.0786**	**0.2795**	**0.6069**	**2.2000e-003**	**0.1777**	**1.5200e-003**	**0.1792**	**0.0477**	**1.4100e-003**	**0.0491**	**0.0000**	**201.9748**	**201.9748**	**7.9600e-003**	**0.0000**	**202.1740**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1562	0.1636	2.7000e-004		8.0900e-003	8.0900e-003		7.6100e-003	7.6100e-003	0.0000	23.1725	23.1725	5.5500e-003	0.0000	23.3113
Total	**0.0171**	**0.1562**	**0.1636**	**2.7000e-004**		**8.0900e-003**	**8.0900e-003**		**7.6100e-003**	**7.6100e-003**	**0.0000**	**23.1725**	**23.1725**	**5.5500e-003**	**0.0000**	**23.3113**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	0.0203	4.0300e-003	6.0000e-005	1.3900e-003	3.0000e-005	1.4200e-003	4.0000e-004	3.0000e-005	4.3000e-004	0.0000	5.5417	5.5417	3.6000e-004	0.0000	5.5508
Worker	6.4600e-003	4.6900e-003	0.0490	1.5000e-004	0.0165	1.0000e-004	0.0166	4.3700e-003	1.0000e-004	4.4600e-003	0.0000	13.1567	13.1567	3.4000e-004	0.0000	13.1653
Total	**7.0000e-003**	**0.0250**	**0.0530**	**2.1000e-004**	**0.0178**	**1.3000e-004**	**0.0180**	**4.7700e-003**	**1.3000e-004**	**4.8900e-003**	**0.0000**	**18.6984**	**18.6984**	**7.0000e-004**	**0.0000**	**18.7161**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1562	0.1636	2.7000e-004		8.0900e-003	8.0900e-003		7.6100e-003	7.6100e-003	0.0000	23.1725	23.1725	5.5500e-003	0.0000	23.3113
Total	**0.0171**	**0.1562**	**0.1636**	**2.7000e-004**		**8.0900e-003**	**8.0900e-003**		**7.6100e-003**	**7.6100e-003**	**0.0000**	**23.1725**	**23.1725**	**5.5500e-003**	**0.0000**	**23.3113**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	0.0203	4.0300e-003	6.0000e-005	1.3300e-003	3.0000e-005	1.3600e-003	3.9000e-004	3.0000e-005	4.2000e-004	0.0000	5.5417	5.5417	3.6000e-004	0.0000	5.5508
Worker	6.4600e-003	4.6900e-003	0.0490	1.5000e-004	0.0156	1.0000e-004	0.0157	4.1600e-003	1.0000e-004	4.2500e-003	0.0000	13.1567	13.1567	3.4000e-004	0.0000	13.1653
Total	**7.0000e-003**	**0.0250**	**0.0530**	**2.1000e-004**	**0.0169**	**1.3000e-004**	**0.0171**	**4.5500e-003**	**1.3000e-004**	**4.6700e-003**	**0.0000**	**18.6984**	**18.6984**	**7.0000e-004**	**0.0000**	**18.7161**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0967	0.9948	1.1283	1.7600e-003		0.0522	0.0522		0.0480	0.0480	0.0000	154.1808	154.1808	0.0499	0.0000	155.4274
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0967**	**0.9948**	**1.1283**	**1.7600e-003**		**0.0522**	**0.0522**		**0.0480**	**0.0480**	**0.0000**	**154.1808**	**154.1808**	**0.0499**	**0.0000**	**155.4274**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3200e-003	4.0200e-003	0.0412	1.2000e-004	0.0127	8.0000e-005	0.0128	3.3600e-003	8.0000e-005	3.4400e-003	0.0000	10.5094	10.5094	2.9000e-004	0.0000	10.5167
Total	**5.3200e-003**	**4.0200e-003**	**0.0412**	**1.2000e-004**	**0.0127**	**8.0000e-005**	**0.0128**	**3.3600e-003**	**8.0000e-005**	**3.4400e-003**	**0.0000**	**10.5094**	**10.5094**	**2.9000e-004**	**0.0000**	**10.5167**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0967	0.9948	1.1283	1.7600e-003		0.0522	0.0522		0.0480	0.0480	0.0000	154.1806	154.1806	0.0499	0.0000	155.4272
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0967**	**0.9948**	**1.1283**	**1.7600e-003**		**0.0522**	**0.0522**		**0.0480**	**0.0480**	**0.0000**	**154.1806**	**154.1806**	**0.0499**	**0.0000**	**155.4272**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3200e-003	4.0200e-003	0.0412	1.2000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	8.0000e-005	3.2800e-003	0.0000	10.5094	10.5094	2.9000e-004	0.0000	10.5167
Total	**5.3200e-003**	**4.0200e-003**	**0.0412**	**1.2000e-004**	**0.0120**	**8.0000e-005**	**0.0121**	**3.2000e-003**	**8.0000e-005**	**3.2800e-003**	**0.0000**	**10.5094**	**10.5094**	**2.9000e-004**	**0.0000**	**10.5167**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.7000e-004	4.9000e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3157	1.3157	3.0000e-005	0.0000	1.3165
Total	**6.5000e-004**	**4.7000e-004**	**4.9000e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3157**	**1.3157**	**3.0000e-005**	**0.0000**	**1.3165**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.7000e-004	4.9000e-003	1.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3157	1.3157	3.0000e-005	0.0000	1.3165
Total	**6.5000e-004**	**4.7000e-004**	**4.9000e-003**	**1.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3157**	**1.3157**	**3.0000e-005**	**0.0000**	**1.3165**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5787					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1176	0.1400	2.3000e-004		7.2500e-003	7.2500e-003		7.2500e-003	7.2500e-003	0.0000	19.6601	19.6601	1.3500e-003	0.0000	19.6938
Total	**0.5956**	**0.1176**	**0.1400**	**2.3000e-004**		**7.2500e-003**	**7.2500e-003**		**7.2500e-003**	**7.2500e-003**	**0.0000**	**19.6601**	**19.6601**	**1.3500e-003**	**0.0000**	**19.6938**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0106	8.0400e-003	0.0823	2.3000e-004	0.0253	1.7000e-004	0.0255	6.7300e-003	1.5000e-004	6.8800e-003	0.0000	21.0187	21.0187	5.9000e-004	0.0000	21.0334
Total	**0.0106**	**8.0400e-003**	**0.0823**	**2.3000e-004**	**0.0253**	**1.7000e-004**	**0.0255**	**6.7300e-003**	**1.5000e-004**	**6.8800e-003**	**0.0000**	**21.0187**	**21.0187**	**5.9000e-004**	**0.0000**	**21.0334**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5787					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1176	0.1400	2.3000e-004		7.2500e-003	7.2500e-003		7.2500e-003	7.2500e-003	0.0000	19.6600	19.6600	1.3500e-003	0.0000	19.6938
Total	**0.5956**	**0.1176**	**0.1400**	**2.3000e-004**		**7.2500e-003**	**7.2500e-003**		**7.2500e-003**	**7.2500e-003**	**0.0000**	**19.6600**	**19.6600**	**1.3500e-003**	**0.0000**	**19.6938**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0106	8.0400e-003	0.0823	2.3000e-004	0.0240	1.7000e-004	0.0242	6.4000e-003	1.5000e-004	6.5600e-003	0.0000	21.0187	21.0187	5.9000e-004	0.0000	21.0334
Total	**0.0106**	**8.0400e-003**	**0.0823**	**2.3000e-004**	**0.0240**	**1.7000e-004**	**0.0242**	**6.4000e-003**	**1.5000e-004**	**6.5600e-003**	**0.0000**	**21.0187**	**21.0187**	**5.9000e-004**	**0.0000**	**21.0334**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0772**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2900e-003	9.4000e-004	9.8000e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	8.9000e-004	0.0000	2.6313	2.6313	7.0000e-005	0.0000	2.6331
Total	**1.2900e-003**	**9.4000e-004**	**9.8000e-003**	**3.0000e-005**	**3.2900e-003**	**2.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.6313**	**2.6313**	**7.0000e-005**	**0.0000**	**2.6331**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0772**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2900e-003	9.4000e-004	9.8000e-003	3.0000e-005	3.1200e-003	2.0000e-005	3.1400e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.6313	2.6313	7.0000e-005	0.0000	2.6331
Total	**1.2900e-003**	**9.4000e-004**	**9.8000e-003**	**3.0000e-005**	**3.1200e-003**	**2.0000e-005**	**3.1400e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**	**0.0000**	**2.6313**	**2.6313**	**7.0000e-005**	**0.0000**	**2.6331**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1729	4.6980	9.3853	0.0266	1.9866	0.0268	2.0135	0.5318	0.0269	0.5586	0.0000	2,531.9890	2,531.9890	0.1578	0.0000	2,535.9344
Unmitigated	1.1729	4.6980	9.3853	0.0266	1.9866	0.0268	2.0135	0.5318	0.0269	0.5586	0.0000	2,531.9890	2,531.9890	0.1578	0.0000	2,535.9344

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	1,529.88	1,529.88	1529.88	5,227,832	5,227,832
Total	1,529.88	1,529.88	1,529.88	5,227,832	5,227,832

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	212.6928	212.6928	0.0121	2.5000e-003	213.7399
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	235.1886	235.1886	0.0134	2.7600e-003	236.3465
NaturalGas Mitigated	0.0119	0.1013	0.0431	6.5000e-004		8.1900e-003	8.1900e-003		8.1900e-003	8.1900e-003	0.0000	117.2844	117.2844	2.2500e-003	2.1500e-003	117.9813
NaturalGas Unmitigated	0.0176	0.1500	0.0638	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	173.7030	173.7030	3.3300e-003	3.1800e-003	174.7352

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.25507e+006	0.0176	0.1500	0.0638	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	173.7030	173.7030	3.3300e-003	3.1800e-003	174.7352
Total		**0.0176**	**0.1500**	**0.0638**	**9.6000e-004**		**0.0121**	**0.0121**		**0.0121**	**0.0121**	**0.0000**	**173.7030**	**173.7030**	**3.3300e-003**	**3.1800e-003**	**174.7352**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.19783e+006	0.0119	0.1013	0.0431	6.5000e-004		8.1900e-003	8.1900e-003		8.1900e-003	8.1900e-003	0.0000	117.2844	117.2844	2.2500e-003	2.1500e-003	117.9813
Total		**0.0119**	**0.1013**	**0.0431**	**6.5000e-004**		**8.1900e-003**	**8.1900e-003**		**8.1900e-003**	**8.1900e-003**	**0.0000**	**117.2844**	**117.2844**	**2.2500e-003**	**2.1500e-003**	**117.9813**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.01579e+006	235.1886	0.0134	2.7600e-003	236.3465
Total		**235.1886**	**0.0134**	**2.7600e-003**	**236.3465**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	918634	212.6928	0.0121	2.5000e-003	213.7399
Total		**212.6928**	**0.0121**	**2.5000e-003**	**213.7399**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8858	0.0249	2.1577	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5207	3.5207	3.4000e-003	0.0000	3.6056
Unmitigated	0.8901	0.0617	2.1733	3.5000e-004		0.0149	0.0149		0.0149	0.0149	0.0000	46.1811	46.1811	4.2100e-003	7.8000e-004	46.5195

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.3100e-003	0.0368	0.0157	2.4000e-004		2.9800e-003	2.9800e-003		2.9800e-003	2.9800e-003	0.0000	42.6604	42.6604	8.2000e-004	7.8000e-004	42.9139
Landscaping	0.0652	0.0249	2.1577	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5207	3.5207	3.4000e-003	0.0000	3.6056
Total	**0.8901**	**0.0617**	**2.1734**	**3.5000e-004**		**0.0149**	**0.0149**		**0.0149**	**0.0149**	**0.0000**	**46.1811**	**46.1811**	**4.2200e-003**	**7.8000e-004**	**46.5195**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7552					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0652	0.0249	2.1577	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5207	3.5207	3.4000e-003	0.0000	3.6056
Total	**0.8858**	**0.0249**	**2.1577**	**1.1000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**3.5207**	**3.5207**	**3.4000e-003**	**0.0000**	**3.6056**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	57.0340	0.3580	9.0100e-003	68.6698
Unmitigated	67.4556	0.4473	0.0112	81.9815

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	13.6172 / 8.58475	67.4556	0.4473	0.0112	81.9815
Total		**67.4556**	**0.4473**	**0.0112**	**81.9815**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	10.8938 / 8.06108	57.0340	0.3580	9.0100e-003	68.6698
Total		**57.0340**	**0.3580**	**9.0100e-003**	**68.6698**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.5156	1.1533	0.0000	48.3490
Unmitigated	19.5156	1.1533	0.0000	48.3490

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	96.14	19.5156	1.1533	0.0000	48.3490
Total		**19.5156**	**1.1533**	**0.0000**	**48.3490**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	96.14	19.5156	1.1533	0.0000	48.3490
Total		**19.5156**	**1.1533**	**0.0000**	**48.3490**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Kimley»Horn

MEMORANDUM

To:	Kari Cano
From:	Alex Pohlman
	Kimley-Horn and Associates, Inc.
Date:	June 2, 2020
Subject:	Palmetto Replacement Site: Proposed Sierra Casa Grande Warehouse Residential Replacement Site – Air Quality and Greenhouse Gas Emissions

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Purpose

The purpose of this memorandum is to identify the air quality and greenhouse gas (GHG) emissions associated with the proposed residential replacement site located on the northeast corner of Palmetto Avenue and Valencia Avenue (Palmetto Replacement Site) in the City of Fontana. Specifically, this analysis addresses the air quality impacts referenced in State CEQA Guidelines Section 15332(d).

Project Description

The project is proposing residential replacement sites for the development of residential dwelling units at two project sites within the City of Fontana in efforts to account for the potential residential dwelling units lost with the development of the proposed Sierra Avenue at Casa Grande Drive Warehouse. The two replacement sites are proposed within the City of Fontana and are shown on Exhibit 1. One replacement site is located on the northeast corner of the intersection of Palmetto Avenue at Valencia Avenue. The site is currently 3.58 acres and occupied by 8 existing residential dwelling units and a church building. The other replacement site, located on the northwest corner of the intersection of Mango Avenue at Malaga Street (Mango Replacement site), is mentioned in this memorandum yet analyzed in a separate document.

The replacement of residential land uses due to the development of the Sierra Avenue at Casa Grande Drive Warehouse would result in the development of a maximum of 219 new residential dwelling units, in addition to the existing units on each site. The 219 dwelling units would be split proportionally between the two replacement sites as follows:

- **Palmetto Avenue/Arrow Boulevard Site**: 24 new dwelling units
  - 8 existing dwelling units
  - 32 onsite total dwelling units

  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

- **Malaga Street/Mango Avenue Site**: 195 new dwelling units
  - 14 existing dwelling units
  - 209 onsite total dwelling units
  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

Air Quality Impacts

SCAQMD Thresholds

The SCAQMD CEQA Air Quality Handbook provides significance thresholds for volatile organic compounds (VOC) (also referred to as reactive organic gases [ROG]), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), particulate matter 10 microns or less in diameter (PM_{10}), and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$). The thresholds apply to both project construction and operation within the SCAQMD jurisdictional boundaries. If the SCAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the lead agency determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in **Table 1: South Coast Air Quality Management District Significance Thresholds**, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 1: South Coast Air Quality Management District Significance Thresholds

Pollutant	Mass Daily Thresholds (pounds per day)	
	Construction	Operations
Nitrogen Oxides (NO_X)	100	55
Volatile Organic Compounds (VOC)[1]	75	55
Particulate Matter up to 10 Microns (PM_{10})	150	150
Particulate Matter up to 2.5 Microns ($PM_{2.5}$)	55	55
Sulphur Oxides (SO_X)	150	150
Carbon Monoxide (CO)	550	550

Notes:
1. VOCs and reactive organic gases (ROGs) are subsets of organic gases that are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Although they represent slightly different subsets of organic gases, they are used interchangeably for the purposes of this analysis.

Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

Construction Emissions

Construction associated with the proposed Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-

precursor pollutants (i.e., ROG and NO_X), PM_{10}, and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from demolition, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The project would demolish eight existing single-family dwellings on the 3.58-acre site and construct 24 multi-family units. It should be noted that this site was originally estimated at 79 units. Since that time the number of units was refined to 24 units. However, the air quality modeling conservatively uses the original estimate. Construction-generated emissions associated the proposed project were calculated using the CARB-approved California Emissions Estimator Model version 2016.3.2 (CalEEMod), which is designed to model emissions for land use development projects, based on typical construction requirements. See Appendix A (Air Quality and GHG Data) for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the proposed project are identified in **Table 2: Project Construction Emissions**. Based on CalEEMod estimates, the Project is anticipated to take thirteen months to complete.

Table 2: Project Construction Emissions

Construction Year	Emissions (pounds per day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 1	8.00	40.55	37.90	0.07	8.93	5.61
Year 2	7.60	29.56	37.22	0.07	2.73	1.71
SCAQMD Threshold	75	100	550	150	150	55
SCAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

1. SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; replace ground cover of area disturbed; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Table 2 shows that construction pollutant emissions would remain below their respective thresholds with implementation of required SCAQMD Rule 403. The project would also be required to comply with SCAQMD Rules 402 and 1113, which prohibit nuisances and limit VOC content in paints, respectively. Compliance with SCAQMD rules 402 and 1113 would further reduce specific construction-related emissions. As shown above, all criteria pollutant emissions would remain below their respective thresholds and impacts would be less than significant.

Operational Emissions

Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, hearths, consumer products, and architectural coatings). Energy source emissions would be generated from electricity and natural gas (non-hearth) usage. **Table 3: Operational Emissions** summarizes the operational emissions attributable to the proposed project. It should be noted that this site was originally estimated at 79 units. Since that time the number of units was refined to 24 units. However, the air quality modeling conservatively uses the original estimate. As shown in **Table 3,** the project's emissions would not exceed SCAQMD thresholds. Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact.

Table 3: Operational Emissions

Source	Emissions (pounds per day)[1]					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Existing Emissions						
Area	2.43	0.17	4.73	0.01	0.61	0.61
Energy	<0.01	0.06	0.03	<0.01	<0.01	<0.01
Mobile	0.46	1.48	2.99	<0.01	0.59	0.17
Total	**2.89**	**1.68**	**7.74**	**0.02**	**1.21**	**0.79**
Proposed Emissions						
Area	1.95	0.08	6.52	<0.01	0.04	0.04
Energy	0.02	0.21	0.09	<0.01	0.02	0.02
Mobile	3.11	9.89	20.74	0.06	4.27	1.18
Total	**5.09**	**10.18**	**27.36**	**0.06**	**4.32**	**1.23**
Net Emissions	***2.20***	***8.50***	***19.62***	***0.04***	***3.11***	***0.44***
SCAQMD Threshold	55	55	550	150	150	55
SCAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1. Emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.

Localized Impacts

The nearest sensitive receptors to the project site are the residences to west on the opposite side of Palmetto Avenue. These residences are located approximately 46 feet (14 meters) from the Project site. To identify impacts to sensitive receptors, the SCAQMD recommends addressing Localized Significance Thresholds (LSTs) for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 4: Equipment-Specific Grading Rates** is used to determine the maximum daily disturbed acreage for comparison to LSTs. For this project, the appropriate source receptor area (SRA) for the localized significance thresholds is the Central San Bernardino Valley (SRA 34) area since this area includes the project site. LSTs apply to NO_X, CO, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Based on the daily equipment modeled in CalEEMod, project construction is anticipated to disturb approximately 3.5 acres in a single day. Therefore, the construction LSTs for 3.5 acres has been interpolated for use in this analysis[1].

Table 4: Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Crawler Tractor	4	0.5	8	2.0
	Graders	0	0.5	8	0
	Rubber-Tired Dozers	3	0.5	8	1.5
	Scrapers	0	1.0	8	0
				Total Acres Graded per Day	**3.5**

Source: CalEEMod version 2016.3.2.

The SCAQMD's methodology indicates that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors to the project site are the residents located 26 feet (14 meters) to the west of the Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, the 25-meter LSTs were used following the SCAQMD LST methodology. **Table 5: Localized Significance of Construction Emissions**, presents the results of localized emissions during construction activity. **Table 5** shows that the emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities.

According to the SCAQMD localized significance threshold methodology, operational LSTs apply to on-site sources. LSTs for receptors located at 25 meters for SRA 34 were utilized in this analysis. The 3.6-acre LST threshold has been interpolated for the 3.56-acre project site. The operational emissions shown in **Table 5** include all on-site project-related stationary sources (i.e., area and energy sources). **Table 5** shows that the maximum daily emissions of these pollutants during operations would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during operational activities.

[1] LST thresholds for 3.5 acres were interpolated using the SCAQMD methodology document (SCAQMD, 2008).

Table 5: Localized Significance of Emissions – Maximum Pounds per Day				
Source/Activity	**Emissions (pounds per day)[1,2]**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions				
Demolition	31.44	21.57	1.81	1.48
Site Preparation	40.50	21.15	8.74	5.56
Grading	24.74	15.86	3.59	2.31
Building Construction, Paving, and Architectural Coating	31.88	33.05	1.73	1.61
Maximum Daily Emissions	*40.50*	*33.05*	*8.74*	*5.56*
SCAQMD Localized Screening Threshold (3.5 acres of disturbance at 25 meters)	220	1,339	11	6
Maximum Daily Emissions Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Operational Emissions				
On-Site Emissions (Area and Energy Sources)	0.29	6.61	0.05	0.05
SCAQMD Localized Screening Threshold (3.6 acres at 25 meters)	223	1,364	3	2
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

Notes:

1. Emissions were calculated using the California Emissions Estimator Model version 2016.3.2 (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.
2. SCAQMD Rule 403 Fugitive Dust applied for construction emissions. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; replace ground cover of area disturbed; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model data outputs.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service (LOS) of an intersection from the proposed project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. An analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can assist in evaluating the potential for CO exceedances. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 *Air Quality Management Plan*. The Basin was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP.

The 2003 *Air Quality Management Plan* is the most recent AQMP that addresses CO concentrations. As part of the SCAQMD CO Hotspot analysis, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 parts per million (ppm), which is well below the 35-ppm federal standard. The proposed project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's 2003 CO hot-spot analysis. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections from 578 daily vehicle trips attributable to the project (520 net new daily trips). Therefore, impacts would be less than significant in this regard.

Greenhouse Gas Emissions

The project would include direct and indirect GHG emissions from project construction and operations. Construction is considered a direct source since these emissions occur at the site. Direct operational-related GHG emissions for the proposed project would include emissions from area and mobile sources, while indirect emissions are from energy consumption, water demand, and solid waste.

Construction GHG Emissions

Construction of the project would result in direct emissions of CO_2, N_2O, and CH_4 from construction equipment and the transport of materials and construction workers to and from the project site.

Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.[2] Total GHG emissions generated during all phases of construction were combined and are presented in **Table 6: Construction Greenhouse Gas Emissions**. The CalEEMod outputs are contained within Appendix A (Air Quality and GHG Data). As shown in **Table 6**, the project construction would result in 695.12 $MTCO_2e$ (approximately 23.17 $MTCO_2e$/year when amortized over 30 years).

Table 6: Construction Greenhouse Gas Emissions	
Construction	**$MTCO_2e$ per Year**
Total Construction	695.13
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model data outputs.	

Operational GHG Emissions

Operational or long-term emissions occur over the life of the proposed project. GHG emissions would result from direct emissions such as project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power over the life of the project, the energy required to convey water to, and wastewater from the project site, the emissions associated with solid waste generated from the project site, and any fugitive refrigerants from air conditioning or refrigerators. **Table 7: Total Project Greenhouse Gas Emissions** summarizes the total GHG emissions associated with proposed project. As shown, the project would generate approximately 1,172.50 $MTCO_2e$/year, which is a net increase of 1,004.86 $MTCO_2e$/year over the existing emissions. The project would not result in an increase in GHG emissions that exceed the SCAQMD's screening threshold of 3,000 $MTCO_2e$/yr. Therefore, project-related GHG emissions would be less than significant.

Conclusion

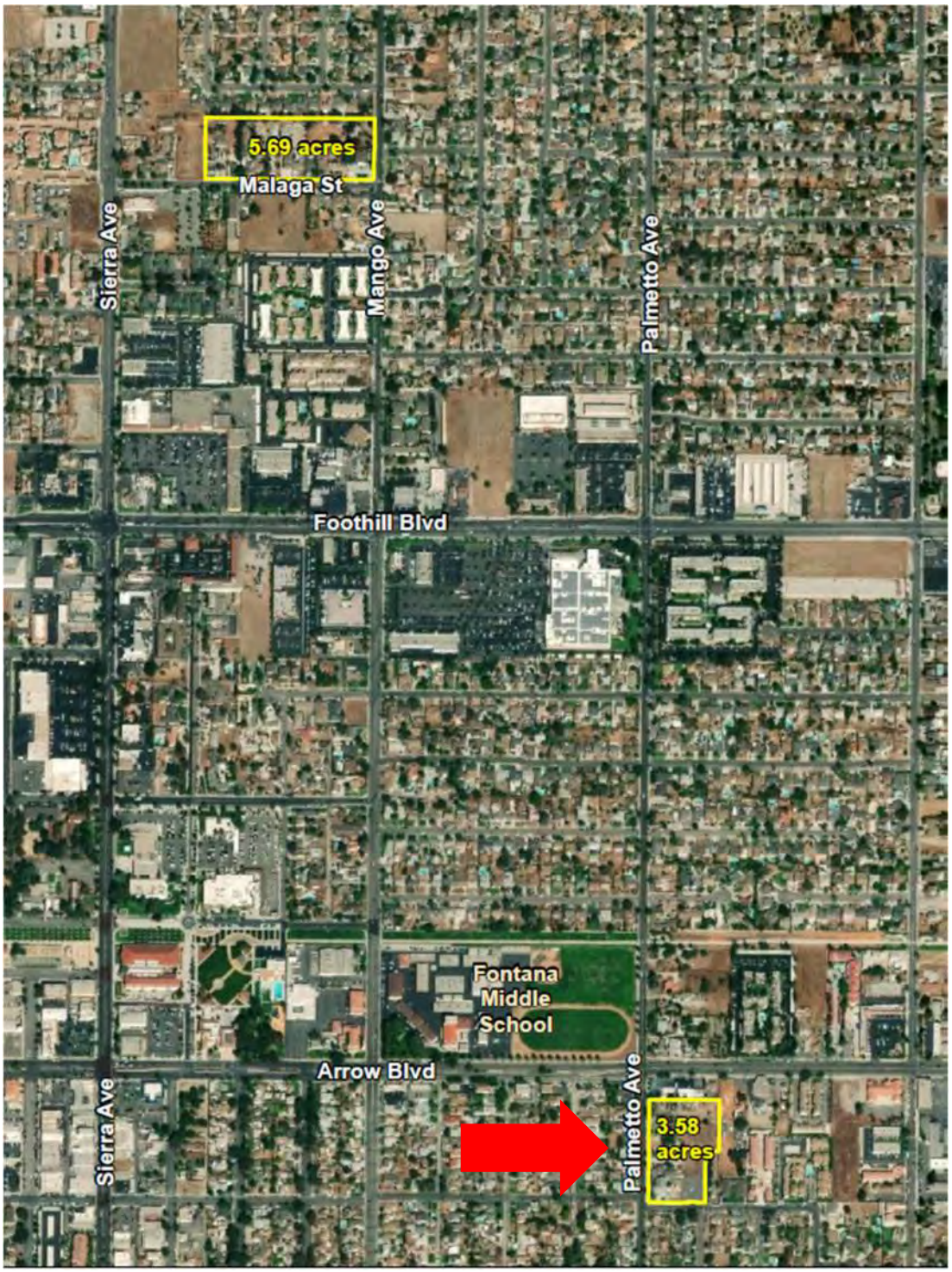
Project implementation would result in less than significant short- and long-term air quality and GHG impacts. No mitigation measures would be required. Therefore, the proposed project would not result in significant effects related to Section 15332(d) of the State CEQA Guidelines.

[2] The project lifetime is based on the standard 30-year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

Table 7: Total Project Greenhouse Gas Emissions	
Emissions Source	**$MTCO_2e$ per Year**
Existing Emissions	
Area Source	2.70
Energy	29.36
Mobile	127.70
Waste	4.74
Water & Wastewater	3.14
Total Existing Emissions	**167.64**
Proposed Emissions	
Construction Amortized over 30 Years	23.17
Area Source	1.36
Energy	125.39
Mobile	959.87
Waste	25.91
Water & Wastewater	36.80
Total Project Emissions[1]	**1,172.50**
Net Emissions[1]	***1,004.86***
SCAQMD Project Threshold	3,000.00
Threshold Exceeded?	**No**
Notes: 1. Totals may be slightly off due to rounding.	
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model data outputs.	

Kimley»Horn

Exhibit 1 - Project Location



Appendix A

Air Quality and GHG Data

Sierra Casa Grande - Existing Palmetto Site

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	8.00	Dwelling Unit	3.58	14,400.00	23

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - Based on Traffic Memo, site is 3.58 acres

Construction Phase - Operation modeling only, no construction

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Energy Use -

Sierra Casa Grande - Existing Palmetto Site - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	1.00
tblLandUse	LotAcreage	2.60	3.58
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.24	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	6.2010e-008
tblVehicleEF	HHD	3.46	56.78
tblVehicleEF	HHD	0.58	0.81
tblVehicleEF	HHD	1.92	1.3628e-003
tblVehicleEF	HHD	6,983.95	11,131.44
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.07	61.71
tblVehicleEF	HHD	2.87	4.04
tblVehicleEF	HHD	20.20	1.89
tblVehicleEF	HHD	0.01	0.09
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005

tblVehicleEF	HHD	3.4490e-003	6.0404e-005
tblVehicleEF	HHD	0.89	4.44
tblVehicleEF	HHD	5.7000e-005	2.2490e-005
tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.06	3.2392e-007
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	1.2225e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005
tblVehicleEF	HHD	3.4490e-003	6.0404e-005
tblVehicleEF	HHD	1.02	5.09
tblVehicleEF	HHD	5.7000e-005	2.2490e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.07	3.5466e-007
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tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	5.9158e-008
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tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.97	60.22
tblVehicleEF	HHD	2.70	3.82

tblVehicleEF	HHD	20.19	1.89
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	1.8400e-004	7.4933e-005
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tblVehicleEF	HHD	2.4800e-004	3.0699e-004
tblVehicleEF	HHD	0.06	3.0995e-007
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.7000e-005	1.2106e-007
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tblVehicleEF	HHD	1.89	1.3521e-003
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tblVehicleEF	HHD	2.83	3.98
tblVehicleEF	HHD	20.20	1.89
tblVehicleEF	HHD	0.02	0.10
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.02	0.09
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	9.4000e-005	4.0516e-005
tblVehicleEF	HHD	3.7830e-003	7.0570e-005
tblVehicleEF	HHD	0.96	4.20
tblVehicleEF	HHD	5.6000e-005	2.3980e-005

tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.5900e-004	3.1321e-004
tblVehicleEF	HHD	0.06	3.2212e-007
tblVehicleEF	HHD	0.06	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	1.2209e-007
tblVehicleEF	HHD	9.4000e-005	4.0516e-005
tblVehicleEF	HHD	3.7830e-003	7.0570e-005
tblVehicleEF	HHD	1.10	4.81
tblVehicleEF	HHD	5.6000e-005	2.3980e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.5900e-004	3.1321e-004
tblVehicleEF	HHD	0.07	3.5268e-007
tblVehicleEF	LDA	4.6640e-003	2.8723e-003
tblVehicleEF	LDA	6.4640e-003	0.05
tblVehicleEF	LDA	0.62	0.73
tblVehicleEF	LDA	1.32	2.18
tblVehicleEF	LDA	261.85	271.31
tblVehicleEF	LDA	59.28	55.44
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.09	0.20
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003
tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003

tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.09	0.24
tblVehicleEF	LDA	2.6230e-003	2.6841e-003
tblVehicleEF	LDA	6.1500e-004	5.4865e-004
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.10	0.27
tblVehicleEF	LDA	5.3170e-003	3.2405e-003
tblVehicleEF	LDA	5.3900e-003	0.05
tblVehicleEF	LDA	0.76	0.88
tblVehicleEF	LDA	1.10	1.83
tblVehicleEF	LDA	286.52	293.82
tblVehicleEF	LDA	59.28	54.78
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003

tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
tblVehicleEF	LDA	0.10	0.57
tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.8710e-003	2.9069e-003
tblVehicleEF	LDA	6.1100e-004	5.4209e-004
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tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	4.5320e-003	2.8134e-003
tblVehicleEF	LDA	6.4200e-003	0.05
tblVehicleEF	LDA	0.58	0.70
tblVehicleEF	LDA	1.30	2.18
tblVehicleEF	LDA	256.02	267.12
tblVehicleEF	LDA	59.28	55.45
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.09	0.19

tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003
tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.24
tblVehicleEF	LDA	2.5640e-003	2.6427e-003
tblVehicleEF	LDA	6.1500e-004	5.4876e-004
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.27
tblVehicleEF	LDT1	0.02	8.7916e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.71	1.72
tblVehicleEF	LDT1	4.02	2.48
tblVehicleEF	LDT1	323.73	321.83

tblVehicleEF	LDT1	72.77	67.22
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.29	0.47
tblVehicleEF	LDT1	3.2600e-003	3.1847e-003
tblVehicleEF	LDT1	7.9900e-004	6.6515e-004
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.66
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT1	0.02	9.8172e-003
tblVehicleEF	LDT1	0.02	0.08

tblVehicleEF	LDT1	2.05	2.04
tblVehicleEF	LDT1	3.30	2.07
tblVehicleEF	LDT1	352.65	345.31
tblVehicleEF	LDT1	72.77	66.35
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4170e-003
tblVehicleEF	LDT1	7.8600e-004	6.5655e-004
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	1.26
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.92

tblVehicleEF	LDT1	0.26	0.44
tblVehicleEF	LDT1	0.01	8.6227e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.62	1.66
tblVehicleEF	LDT1	3.95	2.48
tblVehicleEF	LDT1	316.91	317.45
tblVehicleEF	LDT1	72.77	67.23
tblVehicleEF	LDT1	0.17	0.14
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.1414e-003
tblVehicleEF	LDT1	7.9800e-004	6.6532e-004
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33

tblVehicleEF	LDT1	0.12	0.63
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT2	6.9330e-003	4.9710e-003
tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.09
tblVehicleEF	LDT2	1.85	2.81
tblVehicleEF	LDT2	363.70	346.08
tblVehicleEF	LDT2	81.97	72.50
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.36
tblVehicleEF	LDT2	3.6440e-003	3.4240e-003

tblVehicleEF	LDT2	8.5100e-004	7.1747e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LDT2	7.8730e-003	5.5829e-003
tblVehicleEF	LDT2	7.7350e-003	0.07
tblVehicleEF	LDT2	1.04	1.31
tblVehicleEF	LDT2	1.53	2.36
tblVehicleEF	LDT2	397.09	369.05
tblVehicleEF	LDT2	81.97	71.61
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6513e-003
tblVehicleEF	LDT2	8.4600e-004	7.0862e-004
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8726e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.05
tblVehicleEF	LDT2	1.82	2.82
tblVehicleEF	LDT2	355.82	341.80
tblVehicleEF	LDT2	81.97	72.52
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.45

tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LDT2	3.5650e-003	3.3817e-003
tblVehicleEF	LDT2	8.5100e-004	7.1768e-004
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.14	0.40
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tblVehicleEF	LHD1	0.01	6.6977e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.77	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.27
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08

tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
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tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.8385e-003

tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	2.43
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tblVehicleEF	LHD1	2.58	0.91
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.62
tblVehicleEF	LHD1	30.92	10.18
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.12	1.29
tblVehicleEF	LHD1	0.97	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	7.5090e-003	0.08
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.27	0.07

tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0370e-003	6.4475e-003
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tblVehicleEF	LHD1	7.5090e-003	0.08
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.30	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.7061e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.72	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.26
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.22	1.36
tblVehicleEF	LHD1	1.00	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004

tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4472e-003
tblVehicleEF	LHD1	3.6100e-004	1.0153e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2410e-003	4.4729e-003
tblVehicleEF	LHD2	9.1660e-003	9.5030e-003
tblVehicleEF	LHD2	0.12	1.91
tblVehicleEF	LHD2	0.55	0.54

tblVehicleEF	LHD2	1.29	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54
tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.69	1.49
tblVehicleEF	LHD2	0.56	0.20
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
tblVehicleEF	LHD2	2.7300e-004	7.5837e-005

tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.3190e-003	4.5208e-003
tblVehicleEF	LHD2	8.7380e-003	9.1365e-003
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tblVehicleEF	LHD2	0.56	0.55
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tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.55
tblVehicleEF	LHD2	24.89	7.61
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.59	1.41
tblVehicleEF	LHD2	0.54	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
tblVehicleEF	LHD2	2.7100e-004	7.5288e-005
tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2490e-003	4.4768e-003
tblVehicleEF	LHD2	9.0820e-003	9.4564e-003
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tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.27	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54

tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.67	1.47
tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
tblVehicleEF	LHD2	2.7200e-004	7.5771e-005
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32

tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.00	2.35
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	21.02	19.60
tblVehicleEF	MCY	9.91	8.58
tblVehicleEF	MCY	167.12	212.10
tblVehicleEF	MCY	46.87	61.05
tblVehicleEF	MCY	1.17	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85

tblVehicleEF	MCY	2.0790e-003	2.0989e-003
tblVehicleEF	MCY	6.9500e-004	6.0412e-004
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
tblVehicleEF	MCY	46.87	59.22
tblVehicleEF	MCY	0.99	0.98
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12

tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	1.87	1.62
tblVehicleEF	MCY	2.0790e-003	2.0974e-003
tblVehicleEF	MCY	6.7100e-004	5.8599e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	2.03	1.77
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
tblVehicleEF	MCY	46.87	60.69
tblVehicleEF	MCY	1.13	1.10
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003

tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0901e-003
tblVehicleEF	MCY	6.8600e-004	6.0062e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98
tblVehicleEF	MDV	0.01	6.4815e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.30
tblVehicleEF	MDV	3.59	3.42
tblVehicleEF	MDV	498.66	426.46
tblVehicleEF	MDV	110.76	89.63
tblVehicleEF	MDV	0.20	0.13
tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003

tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2168e-003
tblVehicleEF	MDV	1.1710e-003	8.8695e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.31	0.52
tblVehicleEF	MDV	0.02	7.2388e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.53
tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39

tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4569e-003
tblVehicleEF	MDV	1.1600e-003	8.7602e-004
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45
tblVehicleEF	MDV	0.01	6.3475e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.43
tblVehicleEF	MDV	488.33	421.93

tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1721e-003
tblVehicleEF	MDV	1.1700e-003	8.8718e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02

tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.26
tblVehicleEF	MH	1.64	1.53
tblVehicleEF	MH	0.95	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.2000e-004	1.9062e-004
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.60

tblVehicleEF	MH	0.44	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.74	1.58
tblVehicleEF	MH	6.31	2.05
tblVehicleEF	MH	1,048.28	1,507.73
tblVehicleEF	MH	59.91	19.00
tblVehicleEF	MH	1.50	1.42
tblVehicleEF	MH	0.90	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0900e-004	1.8803e-004
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08

tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.61	1.54
tblVehicleEF	MH	6.87	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.27
tblVehicleEF	MH	1.61	1.50
tblVehicleEF	MH	0.94	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01

tblVehicleEF	MH	7.1900e-004	1.9071e-004
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.43	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1450e-003	5.9776e-003
tblVehicleEF	MHD	0.06	3.0950e-003
tblVehicleEF	MHD	0.33	3.22
tblVehicleEF	MHD	0.31	0.52
tblVehicleEF	MHD	6.00	0.36
tblVehicleEF	MHD	155.10	780.82
tblVehicleEF	MHD	1,105.72	1,006.19
tblVehicleEF	MHD	53.92	2.99
tblVehicleEF	MHD	0.63	6.91
tblVehicleEF	MHD	1.08	2.32
tblVehicleEF	MHD	11.74	1.38
tblVehicleEF	MHD	4.3700e-004	0.02
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
tblVehicleEF	MHD	4.1800e-004	0.02
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003

tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	1.4330e-003	4.5971e-003
tblVehicleEF	MHD	0.05	7.3277e-003
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tblVehicleEF	MHD	1.4910e-003	7.3954e-003
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tblVehicleEF	MHD	6.4400e-004	2.9599e-005
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tblVehicleEF	MHD	7.1400e-004	2.3841e-003
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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2290e-003	6.0068e-003
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tblVehicleEF	MHD	0.24	2.72
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tblVehicleEF	MHD	1,105.72	1,006.20

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tblVehicleEF	MHD	3.6900e-004	0.02
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tblVehicleEF	MHD	8.2200e-004	3.6519e-005
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tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
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tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	2.8480e-003	8.4261e-003
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tblVehicleEF	MHD	0.03	0.22

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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	4.1530e-003	5.9777e-003
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tblVehicleEF	MHD	1,105.72	1,006.19
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tblVehicleEF	MHD	5.3200e-004	0.03
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tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
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tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
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tblVehicleEF	OBUS	1.0800e-004	0.04
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tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
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tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
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tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
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tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
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tblVehicleEF	OBUS	5.4210e-003	0.03
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tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
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tblVehicleEF	SBUS	5.0600e-004	1.2818e-004

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tblVehicleEF	UBUS	0.07	2.5266e-003
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tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.5760e-003	1.0359e-004
tblVehicleEF	UBUS	0.02	7.1139e-003
tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	2.69	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.16	0.03
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3769e-003
tblVehicleEF	UBUS	9.80	34.75
tblVehicleEF	UBUS	14.43	0.85
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.69
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	13.74	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003

tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6140e-003	1.0583e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1393	19.3021	17.0040	0.0275	0.0399	1.1178	1.1577	0.0107	1.0510	1.0617	0.0000	2,615.5757	2,615.5757	0.6258	0.0000	2,631.2195
Maximum	**2.1393**	**19.3021**	**17.0040**	**0.0275**	**0.0399**	**1.1178**	**1.1577**	**0.0107**	**1.0510**	**1.0617**	**0.0000**	**2,615.5757**	**2,615.5757**	**0.6258**	**0.0000**	**2,631.2195**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1393	19.3021	17.0040	0.0275	0.0399	1.1178	1.1577	0.0107	1.0510	1.0617	0.0000	2,615.5757	2,615.5757	0.6258	0.0000	2,631.2195
Maximum	**2.1393**	**19.3021**	**17.0040**	**0.0275**	**0.0399**	**1.1178**	**1.1577**	**0.0107**	**1.0510**	**1.0617**	**0.0000**	**2,615.5757**	**2,615.5757**	**0.6258**	**0.0000**	**2,631.2195**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550
Energy	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Mobile	0.4568	1.3766	2.9857	8.0700e-003	0.5764	0.0118	0.5881	0.1540	0.0118	0.1658		844.0838	844.0838	0.0513		845.3674
Total	**2.8902**	**1.6120**	**7.7419**	**0.0189**	**0.5764**	**0.6315**	**1.2079**	**0.1540**	**0.6315**	**0.7856**	**74.9354**	**1,068.1664**	**1,143.1018**	**0.2775**	**6.5400e-003**	**1,151.9854**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550
Energy	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Mobile	0.4568	1.3766	2.9857	8.0700e-003	0.5764	0.0118	0.5881	0.1540	0.0118	0.1658		844.0838	844.0838	0.0513		845.3674
Total	**2.8902**	**1.6120**	**7.7419**	**0.0189**	**0.5764**	**0.6315**	**1.2079**	**0.1540**	**0.6315**	**0.7856**	**74.9354**	**1,068.1664**	**1,143.1018**	**0.2775**	**6.5400e-003**	**1,151.9854**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	5/15/2020	5/15/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	3.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.0400e-003	0.1055	0.0206	2.7000e-004	6.4000e-003	4.9000e-004	6.8900e-003	1.8400e-003	4.6000e-004	2.3100e-003		28.6101	28.6101	1.8600e-003		28.6566
Worker	0.0164	0.0105	0.1349	3.4000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.1000e-003		33.9025	33.9025	1.0300e-003		33.9284
Total	**0.0194**	**0.1160**	**0.1555**	**6.1000e-004**	**0.0399**	**7.1000e-004**	**0.0406**	**0.0107**	**6.6000e-004**	**0.0114**		**62.5127**	**62.5127**	**2.8900e-003**		**62.5850**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.0400e-003	0.1055	0.0206	2.7000e-004	6.4000e-003	4.9000e-004	6.8900e-003	1.8400e-003	4.6000e-004	2.3100e-003		28.6101	28.6101	1.8600e-003		28.6566
Worker	0.0164	0.0105	0.1349	3.4000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.1000e-003		33.9025	33.9025	1.0300e-003		33.9284
Total	**0.0194**	**0.1160**	**0.1555**	**6.1000e-004**	**0.0399**	**7.1000e-004**	**0.0406**	**0.0107**	**6.6000e-004**	**0.0114**		**62.5127**	**62.5127**	**2.8900e-003**		**62.5850**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4568	1.3766	2.9857	8.0700e-003	0.5764	0.0118	0.5881	0.1540	0.0118	0.1658		844.0838	844.0838	0.0513		845.3674
Unmitigated	0.4568	1.3766	2.9857	8.0700e-003	0.5764	0.0118	0.5881	0.1540	0.0118	0.1658		844.0838	844.0838	0.0513		845.3674

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	76.16	79.28	68.96	258,259	258,259
Total	76.16	79.28	68.96	258,259	258,259

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
NaturalGas Unmitigated	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	670.601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**7.2300e-003**	**0.0618**	**0.0263**	**3.9000e-004**		**5.0000e-003**	**5.0000e-003**		**5.0000e-003**	**5.0000e-003**		**78.8942**	**78.8942**	**1.5100e-003**	**1.4500e-003**	**79.3630**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	0.670601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**7.2300e-003**	**0.0618**	**0.0263**	**3.9000e-004**		**5.0000e-003**	**5.0000e-003**		**5.0000e-003**	**5.0000e-003**		**78.8942**	**78.8942**	**1.5100e-003**	**1.4500e-003**	**79.3630**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550
Unmitigated	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0247					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0200	7.6400e-003	0.6614	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1884	1.1884	1.1500e-003		1.2172
Total	**2.4261**	**0.1736**	**4.7299**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1884**	**220.1238**	**0.2246**	**5.0900e-003**	**227.2550**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0247					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0200	7.6400e-003	0.6614	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1884	1.1884	1.1500e-003		1.2172
Total	**2.4261**	**0.1736**	**4.7299**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1884**	**220.1238**	**0.2246**	**5.0900e-003**	**227.2550**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Existing Palmetto Site

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	8.00	Dwelling Unit	3.58	14,400.00	23

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - Based on Traffic Memo, site is 3.58 acres

Construction Phase - Operation modeling only, no construction

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Energy Use -

Sierra Casa Grande - Existing Palmetto Site - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	1.00
tblLandUse	LotAcreage	2.60	3.58
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.24	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	6.2010e-008
tblVehicleEF	HHD	3.46	56.78
tblVehicleEF	HHD	0.58	0.81
tblVehicleEF	HHD	1.92	1.3628e-003
tblVehicleEF	HHD	6,983.95	11,131.44
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.07	61.71
tblVehicleEF	HHD	2.87	4.04
tblVehicleEF	HHD	20.20	1.89
tblVehicleEF	HHD	0.01	0.09
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005

tblVehicleEF	HHD	3.4490e-003	6.0404e-005
tblVehicleEF	HHD	0.89	4.44
tblVehicleEF	HHD	5.7000e-005	2.2490e-005
tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.06	3.2392e-007
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	1.2225e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005
tblVehicleEF	HHD	3.4490e-003	6.0404e-005
tblVehicleEF	HHD	1.02	5.09
tblVehicleEF	HHD	5.7000e-005	2.2490e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.07	3.5466e-007
tblVehicleEF	HHD	1.17	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	5.9158e-008
tblVehicleEF	HHD	2.52	55.32
tblVehicleEF	HHD	0.58	0.82
tblVehicleEF	HHD	1.80	1.2866e-003
tblVehicleEF	HHD	7,395.94	11,121.59
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.97	60.22
tblVehicleEF	HHD	2.70	3.82

tblVehicleEF	HHD	20.19	1.89
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	1.8400e-004	7.4933e-005
tblVehicleEF	HHD	3.9090e-003	6.8747e-005
tblVehicleEF	HHD	0.84	4.62
tblVehicleEF	HHD	1.2900e-004	5.0009e-005
tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.4800e-004	3.0699e-004
tblVehicleEF	HHD	0.06	3.0995e-007
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.7000e-005	1.2106e-007
tblVehicleEF	HHD	1.8400e-004	7.4933e-005
tblVehicleEF	HHD	3.9090e-003	6.8747e-005
tblVehicleEF	HHD	0.97	5.29
tblVehicleEF	HHD	1.2900e-004	5.0009e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.4800e-004	3.0699e-004

tblVehicleEF	HHD	0.06	3.3936e-007
tblVehicleEF	HHD	1.34	0.23
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	6.1659e-008
tblVehicleEF	HHD	4.76	58.80
tblVehicleEF	HHD	0.58	0.81
tblVehicleEF	HHD	1.89	1.3521e-003
tblVehicleEF	HHD	6,415.00	11,145.04
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	26.84	63.77
tblVehicleEF	HHD	2.83	3.98
tblVehicleEF	HHD	20.20	1.89
tblVehicleEF	HHD	0.02	0.10
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.02	0.09
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	9.4000e-005	4.0516e-005
tblVehicleEF	HHD	3.7830e-003	7.0570e-005
tblVehicleEF	HHD	0.96	4.20
tblVehicleEF	HHD	5.6000e-005	2.3980e-005

tblVehicleEF	HHD	0.09	0.13
tblVehicleEF	HHD	2.5900e-004	3.1321e-004
tblVehicleEF	HHD	0.06	3.2212e-007
tblVehicleEF	HHD	0.06	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	1.2209e-007
tblVehicleEF	HHD	9.4000e-005	4.0516e-005
tblVehicleEF	HHD	3.7830e-003	7.0570e-005
tblVehicleEF	HHD	1.10	4.81
tblVehicleEF	HHD	5.6000e-005	2.3980e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.5900e-004	3.1321e-004
tblVehicleEF	HHD	0.07	3.5268e-007
tblVehicleEF	LDA	4.6640e-003	2.8723e-003
tblVehicleEF	LDA	6.4640e-003	0.05
tblVehicleEF	LDA	0.62	0.73
tblVehicleEF	LDA	1.32	2.18
tblVehicleEF	LDA	261.85	271.31
tblVehicleEF	LDA	59.28	55.44
tblVehicleEF	LDA	0.06	0.04
tblVehicleEF	LDA	0.09	0.20
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003
tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003

tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.09	0.24
tblVehicleEF	LDA	2.6230e-003	2.6841e-003
tblVehicleEF	LDA	6.1500e-004	5.4865e-004
tblVehicleEF	LDA	0.05	0.31
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.10	0.27
tblVehicleEF	LDA	5.3170e-003	3.2405e-003
tblVehicleEF	LDA	5.3900e-003	0.05
tblVehicleEF	LDA	0.76	0.88
tblVehicleEF	LDA	1.10	1.83
tblVehicleEF	LDA	286.52	293.82
tblVehicleEF	LDA	59.28	54.78
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003

tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
tblVehicleEF	LDA	0.10	0.57
tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	2.8710e-003	2.9069e-003
tblVehicleEF	LDA	6.1100e-004	5.4209e-004
tblVehicleEF	LDA	0.10	0.57
tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	4.5320e-003	2.8134e-003
tblVehicleEF	LDA	6.4200e-003	0.05
tblVehicleEF	LDA	0.58	0.70
tblVehicleEF	LDA	1.30	2.18
tblVehicleEF	LDA	256.02	267.12
tblVehicleEF	LDA	59.28	55.45
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.09	0.19

tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003
tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.24
tblVehicleEF	LDA	2.5640e-003	2.6427e-003
tblVehicleEF	LDA	6.1500e-004	5.4876e-004
tblVehicleEF	LDA	0.05	0.29
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.27
tblVehicleEF	LDT1	0.02	8.7916e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.71	1.72
tblVehicleEF	LDT1	4.02	2.48
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tblVehicleEF	LDT1	72.77	67.22
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.29	0.47
tblVehicleEF	LDT1	3.2600e-003	3.1847e-003
tblVehicleEF	LDT1	7.9900e-004	6.6515e-004
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.66
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT1	0.02	9.8172e-003
tblVehicleEF	LDT1	0.02	0.08

tblVehicleEF	LDT1	2.05	2.04
tblVehicleEF	LDT1	3.30	2.07
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tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
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tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4170e-003
tblVehicleEF	LDT1	7.8600e-004	6.5655e-004
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	1.26
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.92

tblVehicleEF	LDT1	0.26	0.44
tblVehicleEF	LDT1	0.01	8.6227e-003
tblVehicleEF	LDT1	0.02	0.09
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tblVehicleEF	LDT1	3.95	2.48
tblVehicleEF	LDT1	316.91	317.45
tblVehicleEF	LDT1	72.77	67.23
tblVehicleEF	LDT1	0.17	0.14
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.1414e-003
tblVehicleEF	LDT1	7.9800e-004	6.6532e-004
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tblVehicleEF	LDT1	0.41	0.33

tblVehicleEF	LDT1	0.12	0.63
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT2	6.9330e-003	4.9710e-003
tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.09
tblVehicleEF	LDT2	1.85	2.81
tblVehicleEF	LDT2	363.70	346.08
tblVehicleEF	LDT2	81.97	72.50
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
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tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.36
tblVehicleEF	LDT2	3.6440e-003	3.4240e-003

tblVehicleEF	LDT2	8.5100e-004	7.1747e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LDT2	7.8730e-003	5.5829e-003
tblVehicleEF	LDT2	7.7350e-003	0.07
tblVehicleEF	LDT2	1.04	1.31
tblVehicleEF	LDT2	1.53	2.36
tblVehicleEF	LDT2	397.09	369.05
tblVehicleEF	LDT2	81.97	71.61
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6513e-003
tblVehicleEF	LDT2	8.4600e-004	7.0862e-004
tblVehicleEF	LDT2	0.14	0.89
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8726e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.05
tblVehicleEF	LDT2	1.82	2.82
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tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.45

tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LDT2	3.5650e-003	3.3817e-003
tblVehicleEF	LDT2	8.5100e-004	7.1768e-004
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.6977e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.77	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.27
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08

tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4472e-003
tblVehicleEF	LHD1	3.6200e-004	1.0164e-004
tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.8385e-003

tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.18	0.83
tblVehicleEF	LHD1	2.58	0.91
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.62
tblVehicleEF	LHD1	30.92	10.18
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.12	1.29
tblVehicleEF	LHD1	0.97	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	7.5090e-003	0.08
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.27	0.07

tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0370e-003	6.4475e-003
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tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
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tblVehicleEF	LHD1	0.01	6.7061e-003
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tblVehicleEF	LHD1	9.6600e-004	0.01
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tblVehicleEF	LHD1	0.01	9.8527e-003
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tblVehicleEF	LHD1	1.0070e-003	2.4440e-004

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tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
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tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2410e-003	4.4729e-003
tblVehicleEF	LHD2	9.1660e-003	9.5030e-003
tblVehicleEF	LHD2	0.12	1.91
tblVehicleEF	LHD2	0.55	0.54

tblVehicleEF	LHD2	1.29	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54
tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
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tblVehicleEF	LHD2	0.56	0.20
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tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
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tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.3190e-003	4.5208e-003
tblVehicleEF	LHD2	8.7380e-003	9.1365e-003
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tblVehicleEF	LHD2	614.63	675.55
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tblVehicleEF	LHD2	0.54	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003

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tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
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tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2490e-003	4.4768e-003
tblVehicleEF	LHD2	9.0820e-003	9.4564e-003
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tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.27	0.60
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tblVehicleEF	LHD2	614.63	675.54

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tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
tblVehicleEF	LHD2	2.7200e-004	7.5771e-005
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32

tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.00	2.35
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	21.02	19.60
tblVehicleEF	MCY	9.91	8.58
tblVehicleEF	MCY	167.12	212.10
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tblVehicleEF	MCY	1.17	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85

tblVehicleEF	MCY	2.0790e-003	2.0989e-003
tblVehicleEF	MCY	6.9500e-004	6.0412e-004
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
tblVehicleEF	MCY	46.87	59.22
tblVehicleEF	MCY	0.99	0.98
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12

tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	1.87	1.62
tblVehicleEF	MCY	2.0790e-003	2.0974e-003
tblVehicleEF	MCY	6.7100e-004	5.8599e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	2.03	1.77
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
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tblVehicleEF	MCY	1.13	1.10
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
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tblVehicleEF	MCY	1.0000e-003	1.0000e-003

tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
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tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0901e-003
tblVehicleEF	MCY	6.8600e-004	6.0062e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98
tblVehicleEF	MDV	0.01	6.4815e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.30
tblVehicleEF	MDV	3.59	3.42
tblVehicleEF	MDV	498.66	426.46
tblVehicleEF	MDV	110.76	89.63
tblVehicleEF	MDV	0.20	0.13
tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003

tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2168e-003
tblVehicleEF	MDV	1.1710e-003	8.8695e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.31	0.52
tblVehicleEF	MDV	0.02	7.2388e-003
tblVehicleEF	MDV	0.02	0.08
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tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39

tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4569e-003
tblVehicleEF	MDV	1.1600e-003	8.7602e-004
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45
tblVehicleEF	MDV	0.01	6.3475e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.43
tblVehicleEF	MDV	488.33	421.93

tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1721e-003
tblVehicleEF	MDV	1.1700e-003	8.8718e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02

tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.26
tblVehicleEF	MH	1.64	1.53
tblVehicleEF	MH	0.95	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.2000e-004	1.9062e-004
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.60

tblVehicleEF	MH	0.44	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.74	1.58
tblVehicleEF	MH	6.31	2.05
tblVehicleEF	MH	1,048.28	1,507.73
tblVehicleEF	MH	59.91	19.00
tblVehicleEF	MH	1.50	1.42
tblVehicleEF	MH	0.90	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0900e-004	1.8803e-004
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08

tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.61	1.54
tblVehicleEF	MH	6.87	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.27
tblVehicleEF	MH	1.61	1.50
tblVehicleEF	MH	0.94	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01

tblVehicleEF	MH	7.1900e-004	1.9071e-004
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.43	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1450e-003	5.9776e-003
tblVehicleEF	MHD	0.06	3.0950e-003
tblVehicleEF	MHD	0.33	3.22
tblVehicleEF	MHD	0.31	0.52
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tblVehicleEF	MHD	1,105.72	1,006.19
tblVehicleEF	MHD	53.92	2.99
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tblVehicleEF	MHD	1.08	2.32
tblVehicleEF	MHD	11.74	1.38
tblVehicleEF	MHD	4.3700e-004	0.02
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
tblVehicleEF	MHD	4.1800e-004	0.02
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003

tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	1.4330e-003	4.5971e-003
tblVehicleEF	MHD	0.05	7.3277e-003
tblVehicleEF	MHD	0.02	0.18
tblVehicleEF	MHD	7.1400e-004	2.3841e-003
tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02
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tblVehicleEF	MHD	0.01	9.5624e-003
tblVehicleEF	MHD	6.4400e-004	2.9599e-005
tblVehicleEF	MHD	1.4330e-003	4.5971e-003
tblVehicleEF	MHD	0.05	7.3277e-003
tblVehicleEF	MHD	0.03	0.23
tblVehicleEF	MHD	7.1400e-004	2.3841e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.40	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2290e-003	6.0068e-003
tblVehicleEF	MHD	0.05	2.9712e-003
tblVehicleEF	MHD	0.24	2.72
tblVehicleEF	MHD	0.32	0.52
tblVehicleEF	MHD	5.61	0.34
tblVehicleEF	MHD	164.29	793.74
tblVehicleEF	MHD	1,105.72	1,006.20

tblVehicleEF	MHD	53.92	2.96
tblVehicleEF	MHD	0.65	6.98
tblVehicleEF	MHD	1.01	2.18
tblVehicleEF	MHD	11.70	1.38
tblVehicleEF	MHD	3.6900e-004	0.02
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
tblVehicleEF	MHD	3.5300e-004	0.02
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	2.8480e-003	8.4261e-003
tblVehicleEF	MHD	0.05	8.5068e-003
tblVehicleEF	MHD	0.02	0.17
tblVehicleEF	MHD	1.6690e-003	4.8007e-003
tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	1.5770e-003	7.5183e-003
tblVehicleEF	MHD	0.01	9.5625e-003
tblVehicleEF	MHD	6.3800e-004	2.9257e-005
tblVehicleEF	MHD	2.8480e-003	8.4261e-003
tblVehicleEF	MHD	0.05	8.5068e-003
tblVehicleEF	MHD	0.03	0.22

tblVehicleEF	MHD	1.6690e-003	4.8007e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.38	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	4.1530e-003	5.9777e-003
tblVehicleEF	MHD	0.06	3.0729e-003
tblVehicleEF	MHD	0.46	3.91
tblVehicleEF	MHD	0.31	0.52
tblVehicleEF	MHD	5.90	0.36
tblVehicleEF	MHD	142.41	762.95
tblVehicleEF	MHD	1,105.72	1,006.19
tblVehicleEF	MHD	53.92	2.99
tblVehicleEF	MHD	0.60	6.81
tblVehicleEF	MHD	1.06	2.28
tblVehicleEF	MHD	11.73	1.38
tblVehicleEF	MHD	5.3200e-004	0.03
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
tblVehicleEF	MHD	5.0900e-004	0.03
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	1.5800e-003	4.8402e-003

tblVehicleEF	MHD	0.05	8.2352e-003
tblVehicleEF	MHD	0.03	0.19
tblVehicleEF	MHD	7.0500e-004	2.4385e-003
tblVehicleEF	MHD	0.04	0.11
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02
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tblVehicleEF	MHD	0.01	9.5624e-003
tblVehicleEF	MHD	6.4300e-004	2.9551e-005
tblVehicleEF	MHD	1.5800e-003	4.8402e-003
tblVehicleEF	MHD	0.05	8.2352e-003
tblVehicleEF	MHD	0.04	0.24
tblVehicleEF	MHD	7.0500e-004	2.4385e-003
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tblVehicleEF	OBUS	0.01	0.13
tblVehicleEF	OBUS	0.01	8.8680e-003
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tblVehicleEF	OBUS	0.32	9.92
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tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
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tblVehicleEF	OBUS	8.2800e-004	1.3703e-004
tblVehicleEF	OBUS	2.2350e-003	0.04
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tblVehicleEF	OBUS	0.05	1.24
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tblVehicleEF	OBUS	0.01	0.01
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tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
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tblVehicleEF	OBUS	0.05	1.24
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tblVehicleEF	OBUS	1.96	0.99
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tblVehicleEF	OBUS	0.13	0.13

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tblVehicleEF	OBUS	5.4210e-003	0.03
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tblVehicleEF	OBUS	1.3100e-004	0.04
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
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tblVehicleEF	OBUS	2.3980e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
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tblVehicleEF	SBUS	0.01	9.3513e-003

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tblVehicleEF	SBUS	0.03	0.04
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tblVehicleEF	SBUS	0.01	0.03
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tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004

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tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.23	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	1.3464e-004
tblVehicleEF	SBUS	5.9210e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.96	4.83
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.25	0.10
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3427e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.85	29.24
tblVehicleEF	SBUS	0.71	0.85

tblVehicleEF	SBUS	5.54	2.67
tblVehicleEF	SBUS	1,181.05	3,221.61
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.98
tblVehicleEF	SBUS	11.91	29.59
tblVehicleEF	SBUS	5.09	5.42
tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.29	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4820e-004

tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.32	0.12
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.2991e-003
tblVehicleEF	UBUS	9.79	34.75
tblVehicleEF	UBUS	14.93	0.84
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.67
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	13.77	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	0.66	0.07

tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.19	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6230e-003	1.0563e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.30	0.04
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.08	8.4408e-003
tblVehicleEF	UBUS	9.90	34.75
tblVehicleEF	UBUS	12.23	0.71
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.47
tblVehicleEF	UBUS	5.98	0.38
tblVehicleEF	UBUS	13.65	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	0.02	7.1139e-003

tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	0.67	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.5760e-003	1.0359e-004
tblVehicleEF	UBUS	0.02	7.1139e-003
tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	2.69	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.16	0.03
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3769e-003
tblVehicleEF	UBUS	9.80	34.75
tblVehicleEF	UBUS	14.43	0.85
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.69
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	13.74	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003

tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6140e-003	1.0583e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1394	19.3018	16.9832	0.0275	0.0399	1.1178	1.1577	0.0107	1.0510	1.0617	0.0000	2,610.9756	2,610.9756	0.6258	0.0000	2,626.6211
Maximum	**2.1394**	**19.3018**	**16.9832**	**0.0275**	**0.0399**	**1.1178**	**1.1577**	**0.0107**	**1.0510**	**1.0617**	**0.0000**	**2,610.9756**	**2,610.9756**	**0.6258**	**0.0000**	**2,626.6211**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.1394	19.3018	16.9832	0.0275	0.0399	1.1178	1.1577	0.0107	1.0510	1.0617	0.0000	2,610.9756	2,610.9756	0.6258	0.0000	2,626.6210
Maximum	**2.1394**	**19.3018**	**16.9832**	**0.0275**	**0.0399**	**1.1178**	**1.1577**	**0.0107**	**1.0510**	**1.0617**	**0.0000**	**2,610.9756**	**2,610.9756**	**0.6258**	**0.0000**	**2,626.6210**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550
Energy	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Mobile	0.3616	1.4471	2.7702	7.6800e-003	0.5764	0.0120	0.5883	0.1540	0.0119	0.1659		804.8643	804.8643	0.0518		806.1592
Total	**2.7949**	**1.6826**	**7.5263**	**0.0185**	**0.5764**	**0.6317**	**1.2081**	**0.1540**	**0.6316**	**0.7857**	**74.9354**	**1,028.9469**	**1,103.8823**	**0.2779**	**6.5400e-003**	**1,112.7772**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550
Energy	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Mobile	0.3616	1.4471	2.7702	7.6800e-003	0.5764	0.0120	0.5883	0.1540	0.0119	0.1659		804.8643	804.8643	0.0518		806.1592
Total	**2.7949**	**1.6826**	**7.5263**	**0.0185**	**0.5764**	**0.6317**	**1.2081**	**0.1540**	**0.6316**	**0.7857**	**74.9354**	**1,028.9469**	**1,103.8823**	**0.2779**	**6.5400e-003**	**1,112.7772**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	5/15/2020	5/15/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	3.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.2 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2000e-003	0.1047	0.0238	2.6000e-004	6.4000e-003	4.9000e-004	6.9000e-003	1.8400e-003	4.7000e-004	2.3100e-003		27.5000	27.5000	2.0500e-003		27.5514
Worker	0.0164	0.0111	0.1109	3.1000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.1000e-003		30.4125	30.4125	9.1000e-004		30.4352
Total	**0.0196**	**0.1157**	**0.1347**	**5.7000e-004**	**0.0399**	**7.1000e-004**	**0.0407**	**0.0107**	**6.7000e-004**	**0.0114**		**57.9125**	**57.9125**	**2.9600e-003**		**57.9866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.2 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2000e-003	0.1047	0.0238	2.6000e-004	6.4000e-003	4.9000e-004	6.9000e-003	1.8400e-003	4.7000e-004	2.3100e-003		27.5000	27.5000	2.0500e-003		27.5514
Worker	0.0164	0.0111	0.1109	3.1000e-004	0.0335	2.2000e-004	0.0338	8.8900e-003	2.0000e-004	9.1000e-003		30.4125	30.4125	9.1000e-004		30.4352
Total	**0.0196**	**0.1157**	**0.1347**	**5.7000e-004**	**0.0399**	**7.1000e-004**	**0.0407**	**0.0107**	**6.7000e-004**	**0.0114**		**57.9125**	**57.9125**	**2.9600e-003**		**57.9866**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3616	1.4471	2.7702	7.6800e-003	0.5764	0.0120	0.5883	0.1540	0.0119	0.1659		804.8643	804.8643	0.0518		806.1592
Unmitigated	0.3616	1.4471	2.7702	7.6800e-003	0.5764	0.0120	0.5883	0.1540	0.0119	0.1659		804.8643	804.8643	0.0518		806.1592

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	76.16	79.28	68.96	258,259	258,259
Total	76.16	79.28	68.96	258,259	258,259

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
NaturalGas Unmitigated	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	670.601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**7.2300e-003**	**0.0618**	**0.0263**	**3.9000e-004**		**5.0000e-003**	**5.0000e-003**		**5.0000e-003**	**5.0000e-003**		**78.8942**	**78.8942**	**1.5100e-003**	**1.4500e-003**	**79.3630**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	0.670601	7.2300e-003	0.0618	0.0263	3.9000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003		78.8942	78.8942	1.5100e-003	1.4500e-003	79.3630
Total		**7.2300e-003**	**0.0618**	**0.0263**	**3.9000e-004**		**5.0000e-003**	**5.0000e-003**		**5.0000e-003**	**5.0000e-003**		**78.8942**	**78.8942**	**1.5100e-003**	**1.4500e-003**	**79.3630**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550
Unmitigated	2.4261	0.1736	4.7299	0.0104		0.6148	0.6148		0.6148	0.6148	74.9354	145.1884	220.1238	0.2246	5.0900e-003	227.2550

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0247					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0200	7.6400e-003	0.6614	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1884	1.1884	1.1500e-003		1.2172
Total	**2.4261**	**0.1736**	**4.7299**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1884**	**220.1238**	**0.2246**	**5.0900e-003**	**227.2550**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0247					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.0963	0.1660	4.0684	0.0104		0.6111	0.6111		0.6111	0.6111	74.9354	144.0000	218.9354	0.2235	5.0900e-003	226.0378
Landscaping	0.0200	7.6400e-003	0.6614	3.0000e-005		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003		1.1884	1.1884	1.1500e-003		1.2172
Total	**2.4261**	**0.1736**	**4.7299**	**0.0104**		**0.6148**	**0.6148**		**0.6148**	**0.6148**	**74.9354**	**145.1884**	**220.1238**	**0.2246**	**5.0900e-003**	**227.2550**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Existing Palmetto Site

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	8.00	Dwelling Unit	3.58	14,400.00	23

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - Based on Traffic Memo, site is 3.58 acres

Construction Phase - Operation modeling only, no construction

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2021 San Bernardino County SC

Energy Use -

Sierra Casa Grande - Existing Palmetto Site - San Bernardino-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	1.00
tblLandUse	LotAcreage	2.60	3.58
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.24	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	6.2010e-008
tblVehicleEF	HHD	3.46	56.78
tblVehicleEF	HHD	0.58	0.81
tblVehicleEF	HHD	1.92	1.3628e-003
tblVehicleEF	HHD	6,983.95	11,131.44
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.07	61.71
tblVehicleEF	HHD	2.87	4.04
tblVehicleEF	HHD	20.20	1.89
tblVehicleEF	HHD	0.01	0.09
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005

tblVehicleEF	HHD	3.4490e-003	6.0404e-005
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tblVehicleEF	HHD	5.7000e-005	2.2490e-005
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tblVehicleEF	HHD	2.4200e-004	2.9900e-004
tblVehicleEF	HHD	0.06	3.2392e-007
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	1.2225e-007
tblVehicleEF	HHD	9.3000e-005	3.8074e-005
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tblVehicleEF	HHD	1.02	5.09
tblVehicleEF	HHD	5.7000e-005	2.2490e-005
tblVehicleEF	HHD	0.13	0.28
tblVehicleEF	HHD	2.4200e-004	2.9900e-004
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tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.11	5.9158e-008
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tblVehicleEF	HHD	0.58	0.82
tblVehicleEF	HHD	1.80	1.2866e-003
tblVehicleEF	HHD	7,395.94	11,121.59
tblVehicleEF	HHD	1,493.95	1,530.36
tblVehicleEF	HHD	5.71	0.01
tblVehicleEF	HHD	28.97	60.22
tblVehicleEF	HHD	2.70	3.82

tblVehicleEF	HHD	20.19	1.89
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.01	0.08
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
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tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.7000e-005	1.2106e-007
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tblVehicleEF	HHD	2.4800e-004	3.0699e-004

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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.5000e-005	3.4971e-007
tblVehicleEF	HHD	0.02	0.09
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8820e-003	8.8324e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	5.0000e-005	3.2155e-007
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tblVehicleEF	HHD	0.96	4.20
tblVehicleEF	HHD	5.6000e-005	2.3980e-005

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tblVehicleEF	HHD	0.06	0.10
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.9000e-005	1.2209e-007
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tblVehicleEF	HHD	5.6000e-005	2.3980e-005
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tblVehicleEF	LDA	0.04	0.04
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tblVehicleEF	LDA	2.0000e-003	2.0000e-003

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tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.09	0.24
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tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
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tblVehicleEF	LDA	1.7130e-003	1.5952e-003

tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.5790e-003	1.4689e-003
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tblVehicleEF	LDA	0.13	0.12
tblVehicleEF	LDA	0.08	0.46
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.08	0.23
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tblVehicleEF	LDA	0.09	0.19

tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.7130e-003	1.5952e-003
tblVehicleEF	LDA	2.3020e-003	1.9422e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	1.5790e-003	1.4689e-003
tblVehicleEF	LDA	2.1170e-003	1.7858e-003
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tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.24
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tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.25
tblVehicleEF	LDA	0.09	0.27
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tblVehicleEF	LDT1	0.02	0.09
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tblVehicleEF	LDT1	4.02	2.48
tblVehicleEF	LDT1	323.73	321.83

tblVehicleEF	LDT1	72.77	67.22
tblVehicleEF	LDT1	0.18	0.15
tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
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tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.29	0.47
tblVehicleEF	LDT1	3.2600e-003	3.1847e-003
tblVehicleEF	LDT1	7.9900e-004	6.6515e-004
tblVehicleEF	LDT1	0.19	0.94
tblVehicleEF	LDT1	0.36	0.29
tblVehicleEF	LDT1	0.13	0.66
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.93
tblVehicleEF	LDT1	0.31	0.52
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tblVehicleEF	LDT1	0.02	0.08

tblVehicleEF	LDT1	2.05	2.04
tblVehicleEF	LDT1	3.30	2.07
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tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
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tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.21	0.92
tblVehicleEF	LDT1	0.24	0.41
tblVehicleEF	LDT1	3.5540e-003	3.4170e-003
tblVehicleEF	LDT1	7.8600e-004	6.5655e-004
tblVehicleEF	LDT1	0.40	1.78
tblVehicleEF	LDT1	0.44	0.34
tblVehicleEF	LDT1	0.29	1.26
tblVehicleEF	LDT1	0.06	0.06
tblVehicleEF	LDT1	0.21	0.92

tblVehicleEF	LDT1	0.26	0.44
tblVehicleEF	LDT1	0.01	8.6227e-003
tblVehicleEF	LDT1	0.02	0.09
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tblVehicleEF	LDT1	72.77	67.23
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tblVehicleEF	LDT1	0.24	0.32
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	2.8630e-003	2.5651e-003
tblVehicleEF	LDT1	3.8930e-003	3.0662e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	2.6370e-003	2.3606e-003
tblVehicleEF	LDT1	3.5800e-003	2.8195e-003
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.28	0.48
tblVehicleEF	LDT1	3.1900e-003	3.1414e-003
tblVehicleEF	LDT1	7.9800e-004	6.6532e-004
tblVehicleEF	LDT1	0.20	0.93
tblVehicleEF	LDT1	0.41	0.33

tblVehicleEF	LDT1	0.12	0.63
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.25	1.09
tblVehicleEF	LDT1	0.31	0.52
tblVehicleEF	LDT2	6.9330e-003	4.9710e-003
tblVehicleEF	LDT2	9.2890e-003	0.08
tblVehicleEF	LDT2	0.85	1.09
tblVehicleEF	LDT2	1.85	2.81
tblVehicleEF	LDT2	363.70	346.08
tblVehicleEF	LDT2	81.97	72.50
tblVehicleEF	LDT2	0.10	0.10
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.36
tblVehicleEF	LDT2	3.6440e-003	3.4240e-003

tblVehicleEF	LDT2	8.5100e-004	7.1747e-004
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.06	0.40
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LDT2	7.8730e-003	5.5829e-003
tblVehicleEF	LDT2	7.7350e-003	0.07
tblVehicleEF	LDT2	1.04	1.31
tblVehicleEF	LDT2	1.53	2.36
tblVehicleEF	LDT2	397.09	369.05
tblVehicleEF	LDT2	81.97	71.61
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.15	0.31
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
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tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.73
tblVehicleEF	LDT2	0.02	0.02

tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	3.9810e-003	3.6513e-003
tblVehicleEF	LDT2	8.4600e-004	7.0862e-004
tblVehicleEF	LDT2	0.14	0.89
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tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.47
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	6.7430e-003	4.8726e-003
tblVehicleEF	LDT2	9.2200e-003	0.08
tblVehicleEF	LDT2	0.81	1.05
tblVehicleEF	LDT2	1.82	2.82
tblVehicleEF	LDT2	355.82	341.80
tblVehicleEF	LDT2	81.97	72.52
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.16	0.33
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003
tblVehicleEF	LDT2	1.7370e-003	1.6805e-003
tblVehicleEF	LDT2	2.4180e-003	2.0128e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	1.5980e-003	1.5465e-003
tblVehicleEF	LDT2	2.2230e-003	1.8508e-003
tblVehicleEF	LDT2	0.07	0.45

tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LDT2	3.5650e-003	3.3817e-003
tblVehicleEF	LDT2	8.5100e-004	7.1768e-004
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.15	0.17
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.55
tblVehicleEF	LDT2	0.14	0.40
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.6977e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.77	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.27
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.26	1.38
tblVehicleEF	LHD1	1.02	0.30
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08

tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4472e-003
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tblVehicleEF	LHD1	3.7970e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8480e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.8385e-003

tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	2.43
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tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.62
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tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.12	1.29
tblVehicleEF	LHD1	0.97	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
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tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	7.5090e-003	0.08
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.27	0.07

tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0370e-003	6.4475e-003
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tblVehicleEF	LHD1	7.5090e-003	0.08
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	4.2150e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.35	0.52
tblVehicleEF	LHD1	0.30	0.08
tblVehicleEF	LHD1	5.4860e-003	0.07
tblVehicleEF	LHD1	0.01	6.7061e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	2.43
tblVehicleEF	LHD1	1.16	0.82
tblVehicleEF	LHD1	2.72	0.96
tblVehicleEF	LHD1	9.23	129.36
tblVehicleEF	LHD1	614.92	661.60
tblVehicleEF	LHD1	30.92	10.26
tblVehicleEF	LHD1	0.09	1.08
tblVehicleEF	LHD1	2.22	1.36
tblVehicleEF	LHD1	1.00	0.29
tblVehicleEF	LHD1	9.6600e-004	0.01
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	0.01	9.8527e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	1.0070e-003	2.4440e-004

tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.5280e-003	2.4632e-003
tblVehicleEF	LHD1	0.01	9.8739e-003
tblVehicleEF	LHD1	9.2600e-004	2.2471e-004
tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.30
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	9.2000e-005	1.2520e-003
tblVehicleEF	LHD1	6.0360e-003	6.4472e-003
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tblVehicleEF	LHD1	4.1760e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.42
tblVehicleEF	LHD1	1.8200e-003	0.02
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.38	0.56
tblVehicleEF	LHD1	0.31	0.08
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2410e-003	4.4729e-003
tblVehicleEF	LHD2	9.1660e-003	9.5030e-003
tblVehicleEF	LHD2	0.12	1.91
tblVehicleEF	LHD2	0.55	0.54

tblVehicleEF	LHD2	1.29	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54
tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.69	1.49
tblVehicleEF	LHD2	0.56	0.20
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
tblVehicleEF	LHD2	2.7300e-004	7.5837e-005

tblVehicleEF	LHD2	1.4000e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	7.3800e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.14	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.3190e-003	4.5208e-003
tblVehicleEF	LHD2	8.7380e-003	9.1365e-003
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tblVehicleEF	LHD2	0.56	0.55
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tblVehicleEF	LHD2	614.63	675.55
tblVehicleEF	LHD2	24.89	7.61
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.59	1.41
tblVehicleEF	LHD2	0.54	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
tblVehicleEF	LHD2	1.2470e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003

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tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.04
tblVehicleEF	LHD2	1.4000e-004	1.8412e-003
tblVehicleEF	LHD2	5.9810e-003	6.5316e-003
tblVehicleEF	LHD2	2.7100e-004	7.5288e-005
tblVehicleEF	LHD2	2.7070e-003	0.04
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32
tblVehicleEF	LHD2	1.6130e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	LHD2	3.8190e-003	0.05
tblVehicleEF	LHD2	5.2490e-003	4.4768e-003
tblVehicleEF	LHD2	9.0820e-003	9.4564e-003
tblVehicleEF	LHD2	0.12	1.91
tblVehicleEF	LHD2	0.55	0.54
tblVehicleEF	LHD2	1.27	0.60
tblVehicleEF	LHD2	14.32	192.43
tblVehicleEF	LHD2	614.63	675.54

tblVehicleEF	LHD2	24.89	7.66
tblVehicleEF	LHD2	0.12	1.49
tblVehicleEF	LHD2	1.67	1.47
tblVehicleEF	LHD2	0.55	0.19
tblVehicleEF	LHD2	1.3030e-003	0.02
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.2500e-004	1.2348e-004
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	2.6810e-003	2.6481e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.9100e-004	1.1354e-004
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.12	0.05
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tblVehicleEF	LHD2	2.7200e-004	7.5771e-005
tblVehicleEF	LHD2	1.4600e-003	0.02
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.02	0.32

tblVehicleEF	LHD2	7.2300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.10	0.31
tblVehicleEF	LHD2	0.13	0.05
tblVehicleEF	MCY	0.00	2.35
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	21.02	19.60
tblVehicleEF	MCY	9.91	8.58
tblVehicleEF	MCY	167.12	212.10
tblVehicleEF	MCY	46.87	61.05
tblVehicleEF	MCY	1.17	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.26	2.35
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.17	1.85

tblVehicleEF	MCY	2.0790e-003	2.0989e-003
tblVehicleEF	MCY	6.9500e-004	6.0412e-004
tblVehicleEF	MCY	1.45	2.84
tblVehicleEF	MCY	0.85	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.76	2.88
tblVehicleEF	MCY	0.50	1.97
tblVehicleEF	MCY	2.37	2.02
tblVehicleEF	MCY	0.00	2.30
tblVehicleEF	MCY	0.41	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	21.14	19.61
tblVehicleEF	MCY	9.06	7.90
tblVehicleEF	MCY	167.12	211.94
tblVehicleEF	MCY	46.87	59.22
tblVehicleEF	MCY	0.99	0.98
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003
tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12

tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.19	2.30
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	1.87	1.62
tblVehicleEF	MCY	2.0790e-003	2.0974e-003
tblVehicleEF	MCY	6.7100e-004	5.8599e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.28	1.12
tblVehicleEF	MCY	2.14	3.54
tblVehicleEF	MCY	2.69	2.83
tblVehicleEF	MCY	0.50	1.94
tblVehicleEF	MCY	2.03	1.77
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	20.06	19.08
tblVehicleEF	MCY	9.53	8.41
tblVehicleEF	MCY	167.12	211.21
tblVehicleEF	MCY	46.87	60.69
tblVehicleEF	MCY	1.13	1.10
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003
tblVehicleEF	MCY	1.8190e-003	1.9176e-003
tblVehicleEF	MCY	3.7460e-003	3.0149e-003
tblVehicleEF	MCY	5.0400e-003	5.0400e-003
tblVehicleEF	MCY	1.0000e-003	1.0000e-003

tblVehicleEF	MCY	1.7050e-003	1.7947e-003
tblVehicleEF	MCY	3.5370e-003	2.8421e-003
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.22	2.33
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.10	1.82
tblVehicleEF	MCY	2.0630e-003	2.0901e-003
tblVehicleEF	MCY	6.8600e-004	6.0062e-004
tblVehicleEF	MCY	1.71	3.14
tblVehicleEF	MCY	1.14	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.71	2.86
tblVehicleEF	MCY	0.57	2.24
tblVehicleEF	MCY	2.28	1.98
tblVehicleEF	MDV	0.01	6.4815e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.55	1.30
tblVehicleEF	MDV	3.59	3.42
tblVehicleEF	MDV	498.66	426.46
tblVehicleEF	MDV	110.76	89.63
tblVehicleEF	MDV	0.20	0.13
tblVehicleEF	MDV	0.36	0.42
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003

tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	5.0000e-003	4.2168e-003
tblVehicleEF	MDV	1.1710e-003	8.8695e-004
tblVehicleEF	MDV	0.10	0.54
tblVehicleEF	MDV	0.21	0.17
tblVehicleEF	MDV	0.09	0.48
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.51
tblVehicleEF	MDV	0.31	0.52
tblVehicleEF	MDV	0.02	7.2388e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.87	1.53
tblVehicleEF	MDV	2.99	2.87
tblVehicleEF	MDV	542.90	450.72
tblVehicleEF	MDV	110.76	88.52
tblVehicleEF	MDV	0.18	0.11
tblVehicleEF	MDV	0.33	0.39

tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.24	0.41
tblVehicleEF	MDV	5.4470e-003	4.4569e-003
tblVehicleEF	MDV	1.1600e-003	8.7602e-004
tblVehicleEF	MDV	0.21	1.01
tblVehicleEF	MDV	0.24	0.20
tblVehicleEF	MDV	0.18	0.88
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.26	0.45
tblVehicleEF	MDV	0.01	6.3475e-003
tblVehicleEF	MDV	0.02	0.10
tblVehicleEF	MDV	1.47	1.25
tblVehicleEF	MDV	3.53	3.43
tblVehicleEF	MDV	488.33	421.93

tblVehicleEF	MDV	110.76	89.65
tblVehicleEF	MDV	0.19	0.12
tblVehicleEF	MDV	0.35	0.41
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.8680e-003	1.7761e-003
tblVehicleEF	MDV	2.5890e-003	2.1405e-003
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	1.7240e-003	1.6382e-003
tblVehicleEF	MDV	2.3820e-003	0.03
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	4.8960e-003	4.1721e-003
tblVehicleEF	MDV	1.1700e-003	8.8718e-004
tblVehicleEF	MDV	0.10	0.50
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.08	0.46
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.13	0.59
tblVehicleEF	MDV	0.31	0.53
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02

tblVehicleEF	MH	3.60	1.54
tblVehicleEF	MH	6.96	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.26
tblVehicleEF	MH	1.64	1.53
tblVehicleEF	MH	0.95	0.24
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	1.56	0.12
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tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.60
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.2000e-004	1.9062e-004
tblVehicleEF	MH	1.56	0.12
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.54	0.04
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.60

tblVehicleEF	MH	0.44	0.11
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.74	1.58
tblVehicleEF	MH	6.31	2.05
tblVehicleEF	MH	1,048.28	1,507.73
tblVehicleEF	MH	59.91	19.00
tblVehicleEF	MH	1.50	1.42
tblVehicleEF	MH	0.90	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0900e-004	1.8803e-004
tblVehicleEF	MH	3.12	0.21
tblVehicleEF	MH	0.11	0.08

tblVehicleEF	MH	1.30	0.09
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.59
tblVehicleEF	MH	0.41	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.61	1.54
tblVehicleEF	MH	6.87	2.21
tblVehicleEF	MH	1,048.28	1,507.66
tblVehicleEF	MH	59.91	19.27
tblVehicleEF	MH	1.61	1.50
tblVehicleEF	MH	0.94	0.23
tblVehicleEF	MH	0.13	0.13
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.2510e-003	2.6760e-004
tblVehicleEF	MH	0.06	0.06
tblVehicleEF	MH	3.2210e-003	3.2701e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1500e-003	0.00
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tblVehicleEF	MH	0.12	0.07
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.40	0.10
tblVehicleEF	MH	0.01	0.01

tblVehicleEF	MH	7.1900e-004	1.9071e-004
tblVehicleEF	MH	1.88	0.13
tblVehicleEF	MH	0.12	0.09
tblVehicleEF	MH	0.56	0.05
tblVehicleEF	MH	0.17	0.10
tblVehicleEF	MH	0.03	1.68
tblVehicleEF	MH	0.43	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.1450e-003	5.9776e-003
tblVehicleEF	MHD	0.06	3.0950e-003
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tblVehicleEF	MHD	1,105.72	1,006.19
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tblVehicleEF	MHD	11.74	1.38
tblVehicleEF	MHD	4.3700e-004	0.02
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
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tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003

tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
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tblVehicleEF	MHD	0.02	0.18
tblVehicleEF	MHD	7.1400e-004	2.3841e-003
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.36	0.02
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tblVehicleEF	MHD	0.01	9.5624e-003
tblVehicleEF	MHD	6.4400e-004	2.9599e-005
tblVehicleEF	MHD	1.4330e-003	4.5971e-003
tblVehicleEF	MHD	0.05	7.3277e-003
tblVehicleEF	MHD	0.03	0.23
tblVehicleEF	MHD	7.1400e-004	2.3841e-003
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.40	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	4.2290e-003	6.0068e-003
tblVehicleEF	MHD	0.05	2.9712e-003
tblVehicleEF	MHD	0.24	2.72
tblVehicleEF	MHD	0.32	0.52
tblVehicleEF	MHD	5.61	0.34
tblVehicleEF	MHD	164.29	793.74
tblVehicleEF	MHD	1,105.72	1,006.20

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tblVehicleEF	MHD	0.65	6.98
tblVehicleEF	MHD	1.01	2.18
tblVehicleEF	MHD	11.70	1.38
tblVehicleEF	MHD	3.6900e-004	0.02
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
tblVehicleEF	MHD	3.5300e-004	0.02
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	2.8480e-003	8.4261e-003
tblVehicleEF	MHD	0.05	8.5068e-003
tblVehicleEF	MHD	0.02	0.17
tblVehicleEF	MHD	1.6690e-003	4.8007e-003
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
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tblVehicleEF	MHD	0.01	9.5625e-003
tblVehicleEF	MHD	6.3800e-004	2.9257e-005
tblVehicleEF	MHD	2.8480e-003	8.4261e-003
tblVehicleEF	MHD	0.05	8.5068e-003
tblVehicleEF	MHD	0.03	0.22

tblVehicleEF	MHD	1.6690e-003	4.8007e-003
tblVehicleEF	MHD	0.05	0.13
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.38	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	4.1530e-003	5.9777e-003
tblVehicleEF	MHD	0.06	3.0729e-003
tblVehicleEF	MHD	0.46	3.91
tblVehicleEF	MHD	0.31	0.52
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tblVehicleEF	MHD	142.41	762.95
tblVehicleEF	MHD	1,105.72	1,006.19
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tblVehicleEF	MHD	1.06	2.28
tblVehicleEF	MHD	11.73	1.38
tblVehicleEF	MHD	5.3200e-004	0.03
tblVehicleEF	MHD	0.13	0.13
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	5.5780e-003	0.07
tblVehicleEF	MHD	8.2200e-004	3.6519e-005
tblVehicleEF	MHD	5.0900e-004	0.03
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	5.3330e-003	0.06
tblVehicleEF	MHD	7.5600e-004	3.3578e-005
tblVehicleEF	MHD	1.5800e-003	4.8402e-003

tblVehicleEF	MHD	0.05	8.2352e-003
tblVehicleEF	MHD	0.03	0.19
tblVehicleEF	MHD	7.0500e-004	2.4385e-003
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tblVehicleEF	MHD	0.02	0.04
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tblVehicleEF	MHD	0.01	9.5624e-003
tblVehicleEF	MHD	6.4300e-004	2.9551e-005
tblVehicleEF	MHD	1.5800e-003	4.8402e-003
tblVehicleEF	MHD	0.05	8.2352e-003
tblVehicleEF	MHD	0.04	0.24
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tblVehicleEF	MHD	0.39	0.02
tblVehicleEF	OBUS	0.01	0.13
tblVehicleEF	OBUS	0.01	8.8680e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	9.46
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tblVehicleEF	OBUS	71.08	13.85
tblVehicleEF	OBUS	0.32	9.92
tblVehicleEF	OBUS	1.10	1.64

tblVehicleEF	OBUS	1.97	0.99
tblVehicleEF	OBUS	1.1300e-004	0.04
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4509e-004
tblVehicleEF	OBUS	1.0800e-004	0.04
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
tblVehicleEF	OBUS	2.2350e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
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tblVehicleEF	OBUS	2.2350e-003	0.04
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tblVehicleEF	OBUS	0.05	1.24
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tblVehicleEF	OBUS	0.01	9.0271e-003
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tblVehicleEF	OBUS	1.92	0.99
tblVehicleEF	OBUS	9.5000e-005	0.03
tblVehicleEF	OBUS	0.13	0.13
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4509e-004
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tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	2.1830e-003	0.03

tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.39	0.08
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tblVehicleEF	OBUS	8.1800e-004	1.3507e-004
tblVehicleEF	OBUS	4.3510e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	2.1830e-003	0.03
tblVehicleEF	OBUS	0.07	0.11
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.42	0.08
tblVehicleEF	OBUS	0.01	0.13
tblVehicleEF	OBUS	0.01	8.8724e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	10.12
tblVehicleEF	OBUS	0.73	0.98
tblVehicleEF	OBUS	6.62	1.68
tblVehicleEF	OBUS	65.88	1,542.13
tblVehicleEF	OBUS	1,126.32	1,439.48
tblVehicleEF	OBUS	71.08	13.85
tblVehicleEF	OBUS	0.31	9.95
tblVehicleEF	OBUS	1.08	1.61
tblVehicleEF	OBUS	1.96	0.99
tblVehicleEF	OBUS	1.3700e-004	0.05
tblVehicleEF	OBUS	0.13	0.13

tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	5.4210e-003	0.03
tblVehicleEF	OBUS	9.1200e-004	1.4509e-004
tblVehicleEF	OBUS	1.3100e-004	0.04
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	5.1650e-003	0.03
tblVehicleEF	OBUS	8.3900e-004	1.3340e-004
tblVehicleEF	OBUS	2.3980e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.98
tblVehicleEF	OBUS	9.5900e-004	0.02
tblVehicleEF	OBUS	0.05	0.09
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.41	0.08
tblVehicleEF	OBUS	6.4100e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.2700e-004	1.3709e-004
tblVehicleEF	OBUS	2.3980e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.24
tblVehicleEF	OBUS	9.5900e-004	0.02
tblVehicleEF	OBUS	0.06	0.11
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.45	0.09
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3513e-003

tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.64	28.74
tblVehicleEF	SBUS	0.71	0.85
tblVehicleEF	SBUS	5.49	2.56
tblVehicleEF	SBUS	1,270.71	3,328.19
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.78
tblVehicleEF	SBUS	12.46	30.54
tblVehicleEF	SBUS	5.17	5.50
tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	3.0740e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.3130e-003	7.4838e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11

tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4628e-004
tblVehicleEF	SBUS	3.0740e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.3130e-003	7.4838e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.4937e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.48	28.38
tblVehicleEF	SBUS	0.72	0.87
tblVehicleEF	SBUS	3.76	1.85
tblVehicleEF	SBUS	1,335.64	3,405.36
tblVehicleEF	SBUS	1,144.20	1,125.93
tblVehicleEF	SBUS	36.06	13.61
tblVehicleEF	SBUS	12.86	31.23
tblVehicleEF	SBUS	4.84	5.16
tblVehicleEF	SBUS	15.20	0.76
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004

tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	5.9210e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.35
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.23	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.2700e-004	1.3464e-004
tblVehicleEF	SBUS	5.9210e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.96	4.83
tblVehicleEF	SBUS	2.9370e-003	0.01
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	9.6420e-003	0.22
tblVehicleEF	SBUS	0.25	0.10
tblVehicleEF	SBUS	0.86	0.72
tblVehicleEF	SBUS	0.01	9.3427e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.85	29.24
tblVehicleEF	SBUS	0.71	0.85

tblVehicleEF	SBUS	5.54	2.67
tblVehicleEF	SBUS	1,181.05	3,221.61
tblVehicleEF	SBUS	1,144.20	1,125.90
tblVehicleEF	SBUS	36.06	14.98
tblVehicleEF	SBUS	11.91	29.59
tblVehicleEF	SBUS	5.09	5.42
tblVehicleEF	SBUS	15.23	0.77
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.74	0.74
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.04
tblVehicleEF	SBUS	5.0600e-004	1.2818e-004
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.32	0.32
tblVehicleEF	SBUS	2.7630e-003	2.7032e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.6500e-004	1.1786e-004
tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.36
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.29	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.5600e-004	1.4820e-004

tblVehicleEF	SBUS	3.2090e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.83
tblVehicleEF	SBUS	1.2980e-003	7.7226e-003
tblVehicleEF	SBUS	0.14	0.14
tblVehicleEF	SBUS	0.01	0.28
tblVehicleEF	SBUS	0.32	0.12
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.2991e-003
tblVehicleEF	UBUS	9.79	34.75
tblVehicleEF	UBUS	14.93	0.84
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.67
tblVehicleEF	UBUS	6.43	0.38
tblVehicleEF	UBUS	13.77	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	0.66	0.07

tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.19	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6230e-003	1.0563e-004
tblVehicleEF	UBUS	8.4220e-003	3.8763e-003
tblVehicleEF	UBUS	0.12	7.2060e-003
tblVehicleEF	UBUS	4.0730e-003	2.2705e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.30	0.04
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.08	8.4408e-003
tblVehicleEF	UBUS	9.90	34.75
tblVehicleEF	UBUS	12.23	0.71
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.47
tblVehicleEF	UBUS	5.98	0.38
tblVehicleEF	UBUS	13.65	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003
tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	0.02	7.1139e-003

tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	0.67	0.07
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.06	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.5760e-003	1.0359e-004
tblVehicleEF	UBUS	0.02	7.1139e-003
tblVehicleEF	UBUS	0.15	8.7364e-003
tblVehicleEF	UBUS	9.6640e-003	4.6900e-003
tblVehicleEF	UBUS	2.69	4.54
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	1.16	0.03
tblVehicleEF	UBUS	1.95	4.45
tblVehicleEF	UBUS	0.09	9.3769e-003
tblVehicleEF	UBUS	9.80	34.75
tblVehicleEF	UBUS	14.43	0.85
tblVehicleEF	UBUS	1,861.83	1,692.28
tblVehicleEF	UBUS	135.15	10.69
tblVehicleEF	UBUS	6.31	0.38
tblVehicleEF	UBUS	13.74	0.13
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6531e-003
tblVehicleEF	UBUS	1.3790e-003	1.2721e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6215e-003

tblVehicleEF	UBUS	0.07	2.5266e-003
tblVehicleEF	UBUS	1.2680e-003	1.1697e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	0.66	0.07
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.17	0.03
tblVehicleEF	UBUS	0.01	3.0273e-003
tblVehicleEF	UBUS	1.6140e-003	1.0583e-004
tblVehicleEF	UBUS	9.6690e-003	3.9997e-003
tblVehicleEF	UBUS	0.15	8.2159e-003
tblVehicleEF	UBUS	4.2700e-003	2.3059e-003
tblVehicleEF	UBUS	2.68	4.54
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	1.28	0.04

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.0700e-003	9.6500e-003	8.4900e-003	1.0000e-005	2.0000e-005	5.6000e-004	5.8000e-004	1.0000e-005	5.3000e-004	5.3000e-004	0.0000	1.1849	1.1849	2.8000e-004	0.0000	1.1920
Maximum	**1.0700e-003**	**9.6500e-003**	**8.4900e-003**	**1.0000e-005**	**2.0000e-005**	**5.6000e-004**	**5.8000e-004**	**1.0000e-005**	**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1849**	**1.1849**	**2.8000e-004**	**0.0000**	**1.1920**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.0700e-003	9.6500e-003	8.4900e-003	1.0000e-005	2.0000e-005	5.6000e-004	5.8000e-004	1.0000e-005	5.3000e-004	5.3000e-004	0.0000	1.1849	1.1849	2.8000e-004	0.0000	1.1920
Maximum	**1.0700e-003**	**9.6500e-003**	**8.4900e-003**	**1.0000e-005**	**2.0000e-005**	**5.6000e-004**	**5.8000e-004**	**1.0000e-005**	**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1849**	**1.1849**	**2.8000e-004**	**0.0000**	**1.1920**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-31-2020	6-29-2020	0.0077	0.0077
		Highest	0.0077	0.0077

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0853	3.0300e-003	0.1335	1.3000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.8498	1.7677	2.6175	2.6600e-003	6.0000e-005	2.7013
Energy	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	29.2070	29.2070	1.1700e-003	4.3000e-004	29.3641
Mobile	0.0623	0.2492	0.4856	1.3400e-003	0.0981	2.0500e-003	0.1002	0.0263	2.0400e-003	0.0283	0.0000	127.4946	127.4946	8.1800e-003	0.0000	127.6991
Waste						0.0000	0.0000		0.0000	0.0000	1.9142	0.0000	1.9142	0.1131	0.0000	4.7424
Water						0.0000	0.0000		0.0000	0.0000	0.1654	2.4167	2.5820	0.0171	4.3000e-004	3.1381
Total	**0.1489**	**0.2635**	**0.6239**	**1.5400e-003**	**0.0981**	**0.0111**	**0.1092**	**0.0263**	**0.0110**	**0.0373**	**2.9293**	**160.8859**	**163.8152**	**0.1423**	**9.2000e-004**	**167.6448**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0853	3.0300e-003	0.1335	1.3000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.8498	1.7677	2.6175	2.6600e-003	6.0000e-005	2.7013
Energy	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	29.2070	29.2070	1.1700e-003	4.3000e-004	29.3641
Mobile	0.0623	0.2492	0.4856	1.3400e-003	0.0981	2.0500e-003	0.1002	0.0263	2.0400e-003	0.0283	0.0000	127.4946	127.4946	8.1800e-003	0.0000	127.6991
Waste						0.0000	0.0000		0.0000	0.0000	1.9142	0.0000	1.9142	0.1131	0.0000	4.7424
Water						0.0000	0.0000		0.0000	0.0000	0.1654	2.4167	2.5820	0.0171	4.3000e-004	3.1381
Total	**0.1489**	**0.2635**	**0.6239**	**1.5400e-003**	**0.0981**	**0.0111**	**0.1092**	**0.0263**	**0.0110**	**0.0373**	**2.9293**	**160.8859**	**163.8152**	**0.1423**	**9.2000e-004**	**167.6448**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	5/15/2020	5/15/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	3.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0600e-003	9.5900e-003	8.4200e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.3000e-004	5.3000e-004	0.0000	1.1581	1.1581	2.8000e-004	0.0000	1.1651
Total	**1.0600e-003**	**9.5900e-003**	**8.4200e-003**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1581**	**1.1581**	**2.8000e-004**	**0.0000**	**1.1651**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	5.0000e-005	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0128	0.0128	0.0000	0.0000	0.0128
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0141	0.0141	0.0000	0.0000	0.0141
Total	**1.0000e-005**	**6.0000e-005**	**7.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0269**	**0.0269**	**0.0000**	**0.0000**	**0.0269**

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0600e-003	9.5900e-003	8.4200e-003	1.0000e-005		5.6000e-004	5.6000e-004		5.3000e-004	5.3000e-004	0.0000	1.1581	1.1581	2.8000e-004	0.0000	1.1651
Total	**1.0600e-003**	**9.5900e-003**	**8.4200e-003**	**1.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**1.1581**	**1.1581**	**2.8000e-004**	**0.0000**	**1.1651**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	5.0000e-005	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0128	0.0128	0.0000	0.0000	0.0128
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0141	0.0141	0.0000	0.0000	0.0141
Total	**1.0000e-005**	**6.0000e-005**	**7.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0269**	**0.0269**	**0.0000**	**0.0000**	**0.0269**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0623	0.2492	0.4856	1.3400e-003	0.0981	2.0500e-003	0.1002	0.0263	2.0400e-003	0.0283	0.0000	127.4946	127.4946	8.1800e-003	0.0000	127.6991
Unmitigated	0.0623	0.2492	0.4856	1.3400e-003	0.0981	2.0500e-003	0.1002	0.0263	2.0400e-003	0.0283	0.0000	127.4946	127.4946	8.1800e-003	0.0000	127.6991

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	76.16	79.28	68.96	258,259	258,259
Total	76.16	79.28	68.96	258,259	258,259

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.1451	16.1451	9.2000e-004	1.9000e-004	16.2246
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.1451	16.1451	9.2000e-004	1.9000e-004	16.2246
NaturalGas Mitigated	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0618	13.0618	2.5000e-004	2.4000e-004	13.1394
NaturalGas Unmitigated	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0618	13.0618	2.5000e-004	2.4000e-004	13.1394

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	244769	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0618	13.0618	2.5000e-004	2.4000e-004	13.1394
Total		**1.3200e-003**	**0.0113**	**4.8000e-003**	**7.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**13.0618**	**13.0618**	**2.5000e-004**	**2.4000e-004**	**13.1394**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	244769	1.3200e-003	0.0113	4.8000e-003	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0618	13.0618	2.5000e-004	2.4000e-004	13.1394
Total		**1.3200e-003**	**0.0113**	**4.8000e-003**	**7.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**13.0618**	**13.0618**	**2.5000e-004**	**2.4000e-004**	**13.1394**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	69731.8	16.1451	9.2000e-004	1.9000e-004	16.2246
Total		**16.1451**	**9.2000e-004**	**1.9000e-004**	**16.2246**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	69731.8	16.1451	9.2000e-004	1.9000e-004	16.2246
Total		**16.1451**	**9.2000e-004**	**1.9000e-004**	**16.2246**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0853	3.0300e-003	0.1335	1.3000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.8498	1.7677	2.6175	2.6600e-003	6.0000e-005	2.7013
Unmitigated	0.0853	3.0300e-003	0.1335	1.3000e-004		8.0900e-003	8.0900e-003		8.0900e-003	8.0900e-003	0.8498	1.7677	2.6175	2.6600e-003	6.0000e-005	2.7013

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.5100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0520					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0262	2.0700e-003	0.0509	1.3000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.8498	1.6329	2.4827	2.5300e-003	6.0000e-005	2.5632
Landscaping	2.5100e-003	9.5000e-004	0.0827	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1348	0.1348	1.3000e-004	0.0000	0.1380
Total	**0.0853**	**3.0200e-003**	**0.1335**	**1.3000e-004**		**8.1000e-003**	**8.1000e-003**		**8.1000e-003**	**8.1000e-003**	**0.8498**	**1.7677**	**2.6175**	**2.6600e-003**	**6.0000e-005**	**2.7013**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.5100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0520					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0262	2.0700e-003	0.0509	1.3000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003	0.8498	1.6329	2.4827	2.5300e-003	6.0000e-005	2.5632
Landscaping	2.5100e-003	9.5000e-004	0.0827	0.0000		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	0.1348	0.1348	1.3000e-004	0.0000	0.1380
Total	**0.0853**	**3.0200e-003**	**0.1335**	**1.3000e-004**		**8.1000e-003**	**8.1000e-003**		**8.1000e-003**	**8.1000e-003**	**0.8498**	**1.7677**	**2.6175**	**2.6600e-003**	**6.0000e-005**	**2.7013**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.5820	0.0171	4.3000e-004	3.1381
Unmitigated	2.5820	0.0171	4.3000e-004	3.1381

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.521232 / 0.328603	2.5820	0.0171	4.3000e-004	3.1381
Total		**2.5820**	**0.0171**	**4.3000e-004**	**3.1381**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	0.521232 / 0.328603	2.5820	0.0171	4.3000e-004	3.1381
Total		**2.5820**	**0.0171**	**4.3000e-004**	**3.1381**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.9142	0.1131	0.0000	4.7424
Unmitigated	1.9142	0.1131	0.0000	4.7424

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	9.43	1.9142	0.1131	0.0000	4.7424
Total		**1.9142**	**0.1131**	**0.0000**	**4.7424**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	9.43	1.9142	0.1131	0.0000	4.7424
Total		**1.9142**	**0.1131**	**0.0000**	**4.7424**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Palmetto - Replacement Site

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	79.00	Dwelling Unit	3.58	79,000.00	226

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Palmetto - Replacement Site - San Bernardino-South Coast County, Summer

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - based on Traffic Memo, lot size is 3.58 acres

Construction Phase - Building Construction, Paving, and Architectural Coating activities are expected to overlap.

Demolition - default squarefootage determined for existing site based on 8 single family units

Vehicle Trips - Based on Traffic Memo, 7.32, CalEEMod trip % error

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Energy Use -

Construction Off-road Equipment Mitigation - RULE 402

Area Mitigation -

Energy Mitigation - CEC - homes built under 2019 standards will use about 53% less energy than those under the 2016 standard

Water Mitigation - Low flow fixtures

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	174.00
tblConstructionPhase	NumDays	20.00	174.00
tblLandUse	LotAcreage	4.94	3.58
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.21	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.29	60.12

tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.82	1.3410e-003
tblVehicleEF	HHD	6,933.41	11,330.49
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	26.50	61.17
tblVehicleEF	HHD	2.50	3.42
tblVehicleEF	HHD	20.21	2.11
tblVehicleEF	HHD	9.7780e-003	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	9.3550e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.84	4.41
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.97	5.05
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.14	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.39	58.80
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.70	1.2660e-003
tblVehicleEF	HHD	7,345.18	11,296.84
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	27.35	59.38
tblVehicleEF	HHD	2.36	3.23
tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	8.2750e-003	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	7.9170e-003	0.03
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	1.6800e-004	7.0000e-005
tblVehicleEF	HHD	3.5970e-003	6.4000e-005
tblVehicleEF	HHD	0.79	4.61
tblVehicleEF	HHD	1.1700e-004	4.7000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.2100e-004	2.8700e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.4000e-005	0.00
tblVehicleEF	HHD	1.6800e-004	7.0000e-005
tblVehicleEF	HHD	3.5970e-003	6.4000e-005
tblVehicleEF	HHD	0.91	5.28
tblVehicleEF	HHD	1.1700e-004	4.7000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.2100e-004	2.8700e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.31	0.22
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	4.53	61.95
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.79	1.3300e-003
tblVehicleEF	HHD	6,364.76	11,376.96

tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	25.32	63.63
tblVehicleEF	HHD	2.46	3.37
tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005
tblVehicleEF	HHD	0.91	4.13
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.06	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.5000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005

tblVehicleEF	HHD	1.05	4.73
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	LDA	4.2030e-003	2.5110e-003
tblVehicleEF	LDA	5.6230e-003	0.05
tblVehicleEF	LDA	0.57	0.67
tblVehicleEF	LDA	1.19	2.11
tblVehicleEF	LDA	251.29	263.44
tblVehicleEF	LDA	57.15	53.83
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.04	0.28
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	9.5370e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.22
tblVehicleEF	LDA	2.5170e-003	2.6060e-003
tblVehicleEF	LDA	5.9200e-004	5.3300e-004
tblVehicleEF	LDA	0.04	0.28
tblVehicleEF	LDA	0.10	0.10

tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.24
tblVehicleEF	LDA	4.7900e-003	2.8350e-003
tblVehicleEF	LDA	4.6890e-003	0.04
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	0.99	1.78
tblVehicleEF	LDA	274.94	285.26
tblVehicleEF	LDA	57.15	53.19
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.07	0.17
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.09	0.53
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.7550e-003	2.8220e-003
tblVehicleEF	LDA	5.8800e-004	5.2600e-004
tblVehicleEF	LDA	0.09	0.53
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42

tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	4.0860e-003	2.4590e-003
tblVehicleEF	LDA	5.5870e-003	0.05
tblVehicleEF	LDA	0.54	0.64
tblVehicleEF	LDA	1.18	2.11
tblVehicleEF	LDA	245.70	259.38
tblVehicleEF	LDA	57.15	53.84
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	9.3400e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.22
tblVehicleEF	LDA	2.4600e-003	2.5660e-003
tblVehicleEF	LDA	5.9100e-004	5.3300e-004
tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	0.01

tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.24
tblVehicleEF	LDT1	0.01	7.5760e-003
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tblVehicleEF	LDT1	1.54	1.52
tblVehicleEF	LDT1	3.61	2.38
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tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.26	0.42
tblVehicleEF	LDT1	3.1570e-003	3.0930e-003
tblVehicleEF	LDT1	7.7300e-004	6.4600e-004
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.20	0.86

tblVehicleEF	LDT1	0.28	0.46
tblVehicleEF	LDT1	0.02	8.4640e-003
tblVehicleEF	LDT1	0.02	0.07
tblVehicleEF	LDT1	1.85	1.80
tblVehicleEF	LDT1	2.97	2.00
tblVehicleEF	LDT1	341.75	335.30
tblVehicleEF	LDT1	70.93	64.44
tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.20	0.28
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.21	0.36
tblVehicleEF	LDT1	3.4420e-003	3.3180e-003
tblVehicleEF	LDT1	7.6200e-004	6.3800e-004
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	1.16
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.23	0.40

tblVehicleEF	LDT1	0.01	7.4310e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.47	1.46
tblVehicleEF	LDT1	3.55	2.39
tblVehicleEF	LDT1	307.06	308.38
tblVehicleEF	LDT1	70.93	65.27
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.21	0.29
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.25	0.43
tblVehicleEF	LDT1	3.0890e-003	3.0520e-003
tblVehicleEF	LDT1	7.7200e-004	6.4600e-004
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.58
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.28	0.47
tblVehicleEF	LDT2	6.3270e-003	4.4090e-003

tblVehicleEF	LDT2	8.1990e-003	0.07
tblVehicleEF	LDT2	0.80	1.00
tblVehicleEF	LDT2	1.67	2.71
tblVehicleEF	LDT2	351.15	333.43
tblVehicleEF	LDT2	79.39	69.90
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.11	0.33
tblVehicleEF	LDT2	3.5180e-003	3.2990e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.12	0.36
tblVehicleEF	LDT2	7.1840e-003	4.9540e-003
tblVehicleEF	LDT2	6.8290e-003	0.06

tblVehicleEF	LDT2	0.97	1.19
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tblVehicleEF	LDT2	383.36	355.41
tblVehicleEF	LDT2	79.39	69.05
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.13	0.28
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8420e-003	3.5160e-003
tblVehicleEF	LDT2	8.1700e-004	6.8300e-004
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tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	6.1560e-003	4.3220e-003
tblVehicleEF	LDT2	8.1410e-003	0.07
tblVehicleEF	LDT2	0.75	0.96

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tblVehicleEF	LDT2	79.39	69.92
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.11	0.34
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tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
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tblVehicleEF	LHD1	5.2170e-003	0.07
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tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42

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tblVehicleEF	LHD1	0.01	9.8770e-003
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tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	3.7070e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.27	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
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tblVehicleEF	LHD1	3.5300e-004	1.0000e-004
tblVehicleEF	LHD1	3.7070e-003	0.04

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tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.2280e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42
tblVehicleEF	LHD1	1.09	0.76
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tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
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tblVehicleEF	LHD1	7.3080e-003	0.07

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tblVehicleEF	LHD1	2.08	1.23

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tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.7940e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9760e-003	6.3570e-003
tblVehicleEF	LHD1	3.5200e-004	1.0000e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.7940e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD2	3.5950e-003	0.05

tblVehicleEF	LHD2	4.6110e-003	4.1040e-003
tblVehicleEF	LHD2	8.1370e-003	8.8770e-003
tblVehicleEF	LHD2	0.12	1.89
tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.20	0.57
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.45
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.49	1.36
tblVehicleEF	LHD2	0.53	0.19
tblVehicleEF	LHD2	1.2830e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3070e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.0300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003

tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6700e-004	7.4000e-005
tblVehicleEF	LHD2	1.3070e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	7.0300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6760e-003	4.1460e-003
tblVehicleEF	LHD2	7.7630e-003	8.5350e-003
tblVehicleEF	LHD2	0.12	1.89
tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.13	0.54
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.40
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.40	1.28
tblVehicleEF	LHD2	0.50	0.18
tblVehicleEF	LHD2	1.2830e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	2.5220e-003	0.04
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6500e-004	7.3000e-005
tblVehicleEF	LHD2	2.5220e-003	0.04
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6180e-003	4.1080e-003
tblVehicleEF	LHD2	8.0640e-003	8.8340e-003
tblVehicleEF	LHD2	0.12	1.89
tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.19	0.57
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25

tblVehicleEF	LHD2	24.46	7.44
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.46	1.33
tblVehicleEF	LHD2	0.52	0.19
tblVehicleEF	LHD2	1.2830e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3460e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6600e-004	7.4000e-005
tblVehicleEF	LHD2	1.3460e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.07	0.07

tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.43	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	20.55	19.26
tblVehicleEF	MCY	9.93	8.60
tblVehicleEF	MCY	167.73	212.03
tblVehicleEF	MCY	46.45	60.73
tblVehicleEF	MCY	1.16	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.23	2.33
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.16	1.84
tblVehicleEF	MCY	2.0770e-003	2.0980e-003
tblVehicleEF	MCY	6.9000e-004	6.0100e-004
tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.74	2.87

tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.35	2.01
tblVehicleEF	MCY	0.00	2.28
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	20.68	19.28
tblVehicleEF	MCY	9.05	7.90
tblVehicleEF	MCY	167.73	211.90
tblVehicleEF	MCY	46.45	58.88
tblVehicleEF	MCY	0.99	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.17	2.28
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	1.86	1.62
tblVehicleEF	MCY	2.0770e-003	2.0970e-003
tblVehicleEF	MCY	6.6700e-004	5.8300e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.67	2.81

tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	2.02	1.76
tblVehicleEF	MCY	0.00	2.31
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.63	18.76
tblVehicleEF	MCY	9.55	8.44
tblVehicleEF	MCY	167.73	211.17
tblVehicleEF	MCY	46.45	60.38
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.19	2.31
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.08	1.81
tblVehicleEF	MCY	2.0610e-003	2.0900e-003
tblVehicleEF	MCY	6.8200e-004	5.9800e-004
tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.69	2.84

tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.27	1.98
tblVehicleEF	MDV	0.01	5.5200e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.35	1.13
tblVehicleEF	MDV	3.25	3.24
tblVehicleEF	MDV	483.94	412.47
tblVehicleEF	MDV	107.92	86.64
tblVehicleEF	MDV	0.17	0.11
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
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tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.8500e-003	4.0780e-003
tblVehicleEF	MDV	1.1370e-003	8.5700e-004
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.11	0.50

tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	0.01	6.2110e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.64	1.35
tblVehicleEF	MDV	2.69	2.71
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tblVehicleEF	MDV	107.92	85.59
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.30	0.35
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.03
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	5.2830e-003	4.3080e-003
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tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.23	0.41

tblVehicleEF	MDV	0.01	5.4050e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.28	1.09
tblVehicleEF	MDV	3.20	3.25
tblVehicleEF	MDV	473.93	408.15
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tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.7490e-003	4.0360e-003
tblVehicleEF	MDV	1.1360e-003	8.5800e-004
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.27	0.48
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.07	1.31
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tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.89
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tblVehicleEF	MH	0.91	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0700e-004	1.8700e-004
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tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.14	0.09
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.40	0.11

tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.19	1.34
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tblVehicleEF	MH	1,045.05	1,487.74
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tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.34	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9700e-004	1.8400e-004
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.49

tblVehicleEF	MH	0.38	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.08	1.31
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tblVehicleEF	MH	0.89	0.23
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tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.8700e-004
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.15	0.09

tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5160e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9450e-003
tblVehicleEF	MHD	0.32	3.17
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.32	0.34
tblVehicleEF	MHD	156.91	758.35
tblVehicleEF	MHD	1,101.52	974.57
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tblVehicleEF	MHD	0.99	1.61
tblVehicleEF	MHD	11.88	1.62
tblVehicleEF	MHD	3.8600e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.6900e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02

tblVehicleEF	MHD	1.5080e-003	7.1830e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1700e-004	2.9000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5800e-003	3.3450e-003
tblVehicleEF	MHD	0.05	2.8280e-003
tblVehicleEF	MHD	0.24	2.75
tblVehicleEF	MHD	0.28	0.33
tblVehicleEF	MHD	4.97	0.32
tblVehicleEF	MHD	166.20	765.37
tblVehicleEF	MHD	1,101.52	974.58
tblVehicleEF	MHD	52.43	2.86
tblVehicleEF	MHD	0.62	5.74
tblVehicleEF	MHD	0.92	1.52
tblVehicleEF	MHD	11.85	1.62
tblVehicleEF	MHD	3.2500e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.1100e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03

tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.02	0.15
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.30	0.01
tblVehicleEF	MHD	1.5950e-003	7.2500e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1100e-004	2.8000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.33	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	3.5220e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9240e-003
tblVehicleEF	MHD	0.45	3.76
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.23	0.34
tblVehicleEF	MHD	144.06	748.63
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89

tblVehicleEF	MHD	0.57	5.74
tblVehicleEF	MHD	0.97	1.59
tblVehicleEF	MHD	11.87	1.62
tblVehicleEF	MHD	4.7000e-004	0.02
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	4.4900e-004	0.02
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.03	0.16
tblVehicleEF	MHD	6.4000e-004	2.2230e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02
tblVehicleEF	MHD	1.3860e-003	7.0900e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1600e-004	2.9000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.04	0.21
tblVehicleEF	MHD	6.4000e-004	2.2230e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	OBUS	0.01	0.12

tblVehicleEF	OBUS	9.9110e-003	6.5960e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	9.35
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.27	1.60
tblVehicleEF	OBUS	70.35	1,526.75
tblVehicleEF	OBUS	1,121.50	1,406.90
tblVehicleEF	OBUS	70.70	13.37
tblVehicleEF	OBUS	0.28	7.45
tblVehicleEF	OBUS	0.97	1.24
tblVehicleEF	OBUS	1.93	1.14
tblVehicleEF	OBUS	6.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	6.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.85
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.8400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1700e-004	1.3200e-004

tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.09
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.42	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	0.01	6.7350e-003
tblVehicleEF	OBUS	0.03	0.01
tblVehicleEF	OBUS	0.26	9.12
tblVehicleEF	OBUS	0.65	0.79
tblVehicleEF	OBUS	5.74	1.49
tblVehicleEF	OBUS	73.50	1,523.07
tblVehicleEF	OBUS	1,121.50	1,406.93
tblVehicleEF	OBUS	70.70	13.18
tblVehicleEF	OBUS	0.29	7.27
tblVehicleEF	OBUS	0.90	1.16
tblVehicleEF	OBUS	1.88	1.13
tblVehicleEF	OBUS	5.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	5.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02

tblVehicleEF	OBUS	0.03	0.87
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.36	0.07
tblVehicleEF	OBUS	7.1400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0800e-004	1.3000e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.11
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.40	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	9.9380e-003	6.6000e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	9.66
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.22	1.60
tblVehicleEF	OBUS	66.00	1,531.82
tblVehicleEF	OBUS	1,121.50	1,406.90
tblVehicleEF	OBUS	70.70	13.38
tblVehicleEF	OBUS	0.27	7.69
tblVehicleEF	OBUS	0.96	1.22
tblVehicleEF	OBUS	1.91	1.14

tblVehicleEF	OBUS	7.7000e-005	0.02
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	7.4000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.83
tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.4200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1600e-004	1.3200e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.07
tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.42	0.08
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5840e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.71	29.13

tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.33	2.53
tblVehicleEF	SBUS	1,258.13	3,306.59
tblVehicleEF	SBUS	1,136.31	1,112.17
tblVehicleEF	SBUS	37.11	14.75
tblVehicleEF	SBUS	11.70	29.52
tblVehicleEF	SBUS	4.77	5.20
tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9260e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.27	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6300e-004	1.4600e-004
tblVehicleEF	SBUS	2.9260e-003	0.02

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.30	0.12
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.7140e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.56	28.79
tblVehicleEF	SBUS	0.66	0.80
tblVehicleEF	SBUS	3.65	1.83
tblVehicleEF	SBUS	1,322.00	3,377.53
tblVehicleEF	SBUS	1,136.31	1,112.20
tblVehicleEF	SBUS	37.11	13.58
tblVehicleEF	SBUS	12.08	30.14
tblVehicleEF	SBUS	4.47	4.88
tblVehicleEF	SBUS	14.99	0.82
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	9.6490e-003	0.03
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	5.6170e-003	0.03

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.37
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.22	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.3500e-004	1.3400e-004
tblVehicleEF	SBUS	5.6170e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.24	0.10
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5760e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.91	29.60
tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.37	2.65
tblVehicleEF	SBUS	1,169.92	3,208.62
tblVehicleEF	SBUS	1,136.31	1,112.17
tblVehicleEF	SBUS	37.11	14.94
tblVehicleEF	SBUS	11.19	28.66
tblVehicleEF	SBUS	4.69	5.12

tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6400e-004	1.4800e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.98	4.87
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	UBUS	1.83	4.45

tblVehicleEF	UBUS	0.08	9.1680e-003
tblVehicleEF	UBUS	9.26	34.75
tblVehicleEF	UBUS	14.34	0.80
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.61
tblVehicleEF	UBUS	5.87	0.38
tblVehicleEF	UBUS	13.57	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.15	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6240e-003	1.0500e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	2.50	4.54

tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.25	0.04
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	8.3240e-003
tblVehicleEF	UBUS	9.36	34.75
tblVehicleEF	UBUS	11.74	0.68
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.41
tblVehicleEF	UBUS	5.45	0.38
tblVehicleEF	UBUS	13.45	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	0.62	0.07
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.02	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.5790e-003	1.0300e-004
tblVehicleEF	UBUS	0.02	8.0540e-003

tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	2.52	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.12	0.03
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	9.2430e-003
tblVehicleEF	UBUS	9.27	34.75
tblVehicleEF	UBUS	13.86	0.81
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.63
tblVehicleEF	UBUS	5.76	0.38
tblVehicleEF	UBUS	13.55	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.13	0.03

tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6160e-003	1.0500e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.24	0.04
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.40
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.0032	40.5536	37.9004	0.0682	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	6,608.9002	6,608.9002	1.4056	0.0000	6,644.0413
2022	7.6016	29.5628	37.2182	0.0678	1.3288	1.4681	2.7968	0.3541	1.3741	1.7282	0.0000	6,563.3657	6,563.3657	1.3964	0.0000	6,598.2755
Maximum	**8.0032**	**40.5536**	**37.9004**	**0.0682**	**18.2675**	**2.0458**	**20.3132**	**9.9840**	**1.8821**	**11.8661**	**0.0000**	**6,608.9002**	**6,608.9002**	**1.4056**	**0.0000**	**6,644.0413**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.0032	40.5536	37.9004	0.0682	6.8843	2.0458	8.9300	3.7301	1.8821	5.6122	0.0000	6,608.9002	6,608.9002	1.4056	0.0000	6,644.0412
2022	7.6016	29.5628	37.2182	0.0678	1.2602	1.4681	2.7282	0.3373	1.3741	1.7114	0.0000	6,563.3657	6,563.3657	1.3964	0.0000	6,598.2755
Maximum	**8.0032**	**40.5536**	**37.9004**	**0.0682**	**6.8843**	**2.0458**	**8.9300**	**3.7301**	**1.8821**	**5.6122**	**0.0000**	**6,608.9002**	**6,608.9002**	**1.4056**	**0.0000**	**6,644.0412**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**58.44**	**0.00**	**49.55**	**60.66**	**0.00**	**46.13**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	31.3013	2.3991	63.4824	0.1457		8.5915	8.5915		8.5915	8.5915	1,049.0949	2,027.7356	3,076.8305	3.1399	0.0712	3,176.5478
Energy	0.0364	0.3107	0.1322	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.5787	396.5787	7.6000e-003	7.2700e-003	398.9354
Mobile	3.1078	9.3481	20.7426	0.0577	4.2116	0.0555	4.2671	1.1256	0.0560	1.1815		6,042.5690	6,042.5690	0.3576		6,051.5086
Total	**34.4455**	**12.0578**	**84.3572**	**0.2054**	**4.2116**	**8.6721**	**12.8837**	**1.1256**	**8.6726**	**9.7982**	**1,049.0949**	**8,466.8834**	**9,515.9782**	**3.5051**	**0.0785**	**9,626.9918**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9533	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361	0.0000	11.7356	11.7356	0.0113	0.0000	12.0187
Energy	0.0246	0.2098	0.0893	1.3400e-003		0.0170	0.0170		0.0170	0.0170		267.7703	267.7703	5.1300e-003	4.9100e-003	269.3615
Mobile	3.1078	9.3481	20.7426	0.0577	4.2116	0.0555	4.2671	1.1256	0.0560	1.1815		6,042.5690	6,042.5690	0.3576		6,051.5086
Total	**5.0856**	**9.6331**	**27.3565**	**0.0594**	**4.2116**	**0.1085**	**4.3201**	**1.1256**	**0.1090**	**1.2345**	**0.0000**	**6,322.0749**	**6,322.0749**	**0.3740**	**4.9100e-003**	**6,332.8888**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**85.24**	**20.11**	**67.57**	**71.07**	**0.00**	**98.75**	**66.47**	**0.00**	**98.74**	**87.40**	**100.00**	**25.33**	**33.56**	**89.33**	**93.74**	**34.22**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	6/1/2021	1/28/2022	5	174	
6	Architectural Coating	Architectural Coating	6/1/2021	1/28/2022	5	174	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 226,800; Residential Outdoor: 75,600; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Sierra Casa Grande - Palmetto - Replacement Site - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	115.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7087	0.0000	0.7087	0.1073	0.0000	0.1073			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.7087**	**1.5513**	**2.2601**	**0.1073**	**1.4411**	**1.5484**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0342	1.3115	0.2031	4.4700e-003	0.1006	3.7100e-003	0.1043	0.0276	3.5500e-003	0.0311		474.4841	474.4841	0.0254		475.1199
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.1104**	**1.3586**	**0.8241**	**6.1200e-003**	**0.2683**	**4.7800e-003**	**0.2731**	**0.0721**	**4.5400e-003**	**0.0766**		**638.5962**	**638.5962**	**0.0301**		**639.3488**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2626	0.0000	0.2626	0.0398	0.0000	0.0398			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.2626**	**1.5513**	**1.8139**	**0.0398**	**1.4411**	**1.4809**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0342	1.3115	0.2031	4.4700e-003	0.0961	3.7100e-003	0.0998	0.0265	3.5500e-003	0.0300		474.4841	474.4841	0.0254		475.1199
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.1104**	**1.3586**	**0.8241**	**6.1200e-003**	**0.2550**	**4.7800e-003**	**0.2598**	**0.0688**	**4.5400e-003**	**0.0733**		**638.5962**	**638.5962**	**0.0301**		**639.3488**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		196.9345	196.9345	5.6000e-003		197.0746
Total	**0.0915**	**0.0565**	**0.7452**	**1.9800e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0545**		**196.9345**	**196.9345**	**5.6000e-003**		**197.0746**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6936	0.0000	6.6936	3.6793	0.0000	3.6793			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**6.6936**	**2.0445**	**8.7380**	**3.6793**	**1.8809**	**5.5602**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0915	0.0565	0.7452	1.9800e-003	0.1907	1.2900e-003	0.1920	0.0508	1.1900e-003	0.0520		196.9345	196.9345	5.6000e-003		197.0746
Total	**0.0915**	**0.0565**	**0.7452**	**1.9800e-003**	**0.1907**	**1.2900e-003**	**0.1920**	**0.0508**	**1.1900e-003**	**0.0520**		**196.9345**	**196.9345**	**5.6000e-003**		**197.0746**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5523**	**1.1599**	**7.7123**	**3.3675**	**1.0671**	**4.4346**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4276	0.0000	2.4276	1.2477	0.0000	1.2477			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**2.4276**	**1.1599**	**3.5876**	**1.2477**	**1.0671**	**2.3148**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0311	1.1573	0.2178	3.2400e-003	0.0769	1.9800e-003	0.0788	0.0221	1.9000e-003	0.0240		341.5072	341.5072	0.0216		342.0467
Worker	0.4116	0.2544	3.3533	8.9000e-003	0.9054	5.7900e-003	0.9112	0.2401	5.3300e-003	0.2455		886.2052	886.2052	0.0252		886.8358
Total	**0.4426**	**1.4116**	**3.5710**	**0.0121**	**0.9823**	**7.7700e-003**	**0.9900**	**0.2622**	**7.2300e-003**	**0.2695**		**1,227.7124**	**1,227.7124**	**0.0468**		**1,228.8825**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0311	1.1573	0.2178	3.2400e-003	0.0736	1.9800e-003	0.0756	0.0213	1.9000e-003	0.0232		341.5072	341.5072	0.0216		342.0467
Worker	0.4116	0.2544	3.3533	8.9000e-003	0.8582	5.7900e-003	0.8640	0.2285	5.3300e-003	0.2339		886.2052	886.2052	0.0252		886.8358
Total	**0.4426**	**1.4116**	**3.5710**	**0.0121**	**0.9317**	**7.7700e-003**	**0.9395**	**0.2498**	**7.2300e-003**	**0.2571**		**1,227.7124**	**1,227.7124**	**0.0468**		**1,228.8825**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0289	1.0975	0.2013	3.2100e-003	0.0769	1.6700e-003	0.0785	0.0221	1.5900e-003	0.0237		338.7691	338.7691	0.0208		339.2900
Worker	0.3843	0.2287	3.0805	8.5800e-003	0.9054	5.6200e-003	0.9110	0.2401	5.1800e-003	0.2453		854.2280	854.2280	0.0226		854.7936
Total	**0.4133**	**1.3263**	**3.2818**	**0.0118**	**0.9823**	**7.2900e-003**	**0.9895**	**0.2622**	**6.7700e-003**	**0.2690**		**1,192.9971**	**1,192.9971**	**0.0435**		**1,194.0835**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0289	1.0975	0.2013	3.2100e-003	0.0736	1.6700e-003	0.0752	0.0213	1.5900e-003	0.0229		338.7691	338.7691	0.0208		339.2900
Worker	0.3843	0.2287	3.0805	8.5800e-003	0.8582	5.6200e-003	0.8638	0.2285	5.1800e-003	0.2337		854.2280	854.2280	0.0226		854.7936
Total	**0.4133**	**1.3263**	**3.2818**	**0.0118**	**0.9317**	**7.2900e-003**	**0.9390**	**0.2498**	**6.7700e-003**	**0.2566**		**1,192.9971**	**1,192.9971**	**0.0435**		**1,194.0835**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0762	0.0471	0.6210	1.6500e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		164.1121	164.1121	4.6700e-003		164.2289
Total	**0.0762**	**0.0471**	**0.6210**	**1.6500e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**164.1121**	**164.1121**	**4.6700e-003**		**164.2289**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0712	0.0424	0.5705	1.5900e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		158.1904	158.1904	4.1900e-003		158.2951
Total	**0.0712**	**0.0424**	**0.5705**	**1.5900e-003**	**0.1677**	**1.0400e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**158.1904**	**158.1904**	**4.1900e-003**		**158.2951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0712	0.0424	0.5705	1.5900e-003	0.1589	1.0400e-003	0.1600	0.0423	9.6000e-004	0.0433		158.1904	158.1904	4.1900e-003		158.2951
Total	**0.0712**	**0.0424**	**0.5705**	**1.5900e-003**	**0.1589**	**1.0400e-003**	**0.1600**	**0.0423**	**9.6000e-004**	**0.0433**		**158.1904**	**158.1904**	**4.1900e-003**		**158.2951**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**4.2466**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0813	0.0503	0.6624	1.7600e-003	0.1788	1.1400e-003	0.1800	0.0474	1.0500e-003	0.0485		175.0529	175.0529	4.9800e-003		175.1774
Total	**0.0813**	**0.0503**	**0.6624**	**1.7600e-003**	**0.1788**	**1.1400e-003**	**0.1800**	**0.0474**	**1.0500e-003**	**0.0485**		**175.0529**	**175.0529**	**4.9800e-003**		**175.1774**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**4.2466**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0813	0.0503	0.6624	1.7600e-003	0.1695	1.1400e-003	0.1707	0.0451	1.0500e-003	0.0462		175.0529	175.0529	4.9800e-003		175.1774
Total	**0.0813**	**0.0503**	**0.6624**	**1.7600e-003**	**0.1695**	**1.1400e-003**	**0.1707**	**0.0451**	**1.0500e-003**	**0.0462**		**175.0529**	**175.0529**	**4.9800e-003**		**175.1774**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**4.2322**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0759	0.0452	0.6085	1.6900e-003	0.1788	1.1100e-003	0.1800	0.0474	1.0200e-003	0.0485		168.7364	168.7364	4.4700e-003		168.8481
Total	**0.0759**	**0.0452**	**0.6085**	**1.6900e-003**	**0.1788**	**1.1100e-003**	**0.1800**	**0.0474**	**1.0200e-003**	**0.0485**		**168.7364**	**168.7364**	**4.4700e-003**		**168.8481**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**4.2322**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0759	0.0452	0.6085	1.6900e-003	0.1695	1.1100e-003	0.1706	0.0451	1.0200e-003	0.0462		168.7364	168.7364	4.4700e-003		168.8481
Total	**0.0759**	**0.0452**	**0.6085**	**1.6900e-003**	**0.1695**	**1.1100e-003**	**0.1706**	**0.0451**	**1.0200e-003**	**0.0462**		**168.7364**	**168.7364**	**4.4700e-003**		**168.8481**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.1078	9.3481	20.7426	0.0577	4.2116	0.0555	4.2671	1.1256	0.0560	1.1815		6,042.5690	6,042.5690	0.3576		6,051.5086
Unmitigated	3.1078	9.3481	20.7426	0.0577	4.2116	0.0555	4.2671	1.1256	0.0560	1.1815		6,042.5690	6,042.5690	0.3576		6,051.5086

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	578.28	578.28	578.28	1,979,359	1,979,359
Total	578.28	578.28	578.28	1,979,359	1,979,359

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.40	19.00	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0246	0.2098	0.0893	1.3400e-003		0.0170	0.0170		0.0170	0.0170		267.7703	267.7703	5.1300e-003	4.9100e-003	269.3615
NaturalGas Unmitigated	0.0364	0.3107	0.1322	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.5787	396.5787	7.6000e-003	7.2700e-003	398.9354

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	3370.92	0.0364	0.3107	0.1322	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.5787	396.5787	7.6000e-003	7.2700e-003	398.9354
Total		**0.0364**	**0.3107**	**0.1322**	**1.9800e-003**		**0.0251**	**0.0251**		**0.0251**	**0.0251**		**396.5787**	**396.5787**	**7.6000e-003**	**7.2700e-003**	**398.9354**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2.27605	0.0246	0.2098	0.0893	1.3400e-003		0.0170	0.0170		0.0170	0.0170		267.7703	267.7703	5.1300e-003	4.9100e-003	269.3615
Total		**0.0246**	**0.2098**	**0.0893**	**1.3400e-003**		**0.0170**	**0.0170**		**0.0170**	**0.0170**		**267.7703**	**267.7703**	**5.1300e-003**	**4.9100e-003**	**269.3615**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9533	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361	0.0000	11.7356	11.7356	0.0113	0.0000	12.0187
Unmitigated	31.3013	2.3991	63.4824	0.1457		8.5915	8.5915		8.5915	8.5915	1,049.0949	2,027.7356	3,076.8305	3.1399	0.0712	3,176.5478

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	29.3480	2.3238	56.9578	0.1453		8.5555	8.5555		8.5555	8.5555	1,049.0949	2,016.0000	3,065.0949	3.1286	0.0712	3,164.5291
Landscaping	0.1971	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361		11.7356	11.7356	0.0113		12.0187
Total	**31.3013**	**2.3991**	**63.4824**	**0.1456**		**8.5915**	**8.5915**		**8.5915**	**8.5915**	**1,049.0949**	**2,027.7356**	**3,076.8305**	**3.1399**	**0.0712**	**3,176.5478**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1971	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361		11.7356	11.7356	0.0113		12.0187
Total	**1.9533**	**0.0753**	**6.5246**	**3.4000e-004**		**0.0361**	**0.0361**		**0.0361**	**0.0361**	**0.0000**	**11.7356**	**11.7356**	**0.0113**	**0.0000**	**12.0187**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Palmetto - Replacement Site

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	79.00	Dwelling Unit	3.58	79,000.00	226

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Palmetto - Replacement Site - San Bernardino-South Coast County, Winter

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - based on Traffic Memo, lot size is 3.58 acres

Construction Phase - Building Construction, Paving, and Architectural Coating activities are expected to overlap.

Demolition - default squarefootage determined for existing site based on 8 single family units

Vehicle Trips - Based on Traffic Memo, 7.32, CalEEMod trip % error

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Energy Use -

Construction Off-road Equipment Mitigation - RULE 402

Area Mitigation -

Energy Mitigation - CEC - homes built under 2019 standards will use about 53% less energy than those under the 2016 standard

Water Mitigation - Low flow fixtures

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	174.00
tblConstructionPhase	NumDays	20.00	174.00
tblLandUse	LotAcreage	4.94	3.58
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.21	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.29	60.12

tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.82	1.3410e-003
tblVehicleEF	HHD	6,933.41	11,330.49
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	26.50	61.17
tblVehicleEF	HHD	2.50	3.42
tblVehicleEF	HHD	20.21	2.11
tblVehicleEF	HHD	9.7780e-003	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	9.3550e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
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tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.97	5.05
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.14	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.39	58.80
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.70	1.2660e-003
tblVehicleEF	HHD	7,345.18	11,296.84
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	27.35	59.38
tblVehicleEF	HHD	2.36	3.23
tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	8.2750e-003	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
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tblVehicleEF	HHD	7.9170e-003	0.03
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
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tblVehicleEF	HHD	2.2100e-004	2.8700e-004
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tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	HHD	0.57	0.67
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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
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tblVehicleEF	HHD	0.91	4.13
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.06	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.5000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005

tblVehicleEF	HHD	1.05	4.73
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
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tblVehicleEF	LDA	1.5460e-003	1.3980e-003
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tblVehicleEF	LDA	0.06	0.19
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tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42

tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.07	0.21
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tblVehicleEF	LDA	0.08	0.18
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tblVehicleEF	LDA	2.2790e-003	1.8560e-003
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tblVehicleEF	LDA	2.0960e-003	1.7060e-003
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tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	9.3400e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.22
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tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
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tblVehicleEF	LDA	0.08	0.24
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tblVehicleEF	LDT1	70.93	65.25
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.26	0.42
tblVehicleEF	LDT1	3.1570e-003	3.0930e-003
tblVehicleEF	LDT1	7.7300e-004	6.4600e-004
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.20	0.86

tblVehicleEF	LDT1	0.28	0.46
tblVehicleEF	LDT1	0.02	8.4640e-003
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tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.20	0.28
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.21	0.36
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tblVehicleEF	LDT1	7.6200e-004	6.3800e-004
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	1.16
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.23	0.40

tblVehicleEF	LDT1	0.01	7.4310e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.47	1.46
tblVehicleEF	LDT1	3.55	2.39
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tblVehicleEF	LDT1	0.21	0.29
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tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
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tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.25	0.43
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tblVehicleEF	LDT1	7.7200e-004	6.4600e-004
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.58
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.28	0.47
tblVehicleEF	LDT2	6.3270e-003	4.4090e-003

tblVehicleEF	LDT2	8.1990e-003	0.07
tblVehicleEF	LDT2	0.80	1.00
tblVehicleEF	LDT2	1.67	2.71
tblVehicleEF	LDT2	351.15	333.43
tblVehicleEF	LDT2	79.39	69.90
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.11	0.33
tblVehicleEF	LDT2	3.5180e-003	3.2990e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.12	0.36
tblVehicleEF	LDT2	7.1840e-003	4.9540e-003
tblVehicleEF	LDT2	6.8290e-003	0.06

tblVehicleEF	LDT2	0.97	1.19
tblVehicleEF	LDT2	1.38	2.28
tblVehicleEF	LDT2	383.36	355.41
tblVehicleEF	LDT2	79.39	69.05
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.13	0.28
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8420e-003	3.5160e-003
tblVehicleEF	LDT2	8.1700e-004	6.8300e-004
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	6.1560e-003	4.3220e-003
tblVehicleEF	LDT2	8.1410e-003	0.07
tblVehicleEF	LDT2	0.75	0.96

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tblVehicleEF	LDT2	343.55	329.34
tblVehicleEF	LDT2	79.39	69.92
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
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tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	3.4410e-003	3.2580e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
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tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.1020e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42

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tblVehicleEF	LHD1	2.12	1.25
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tblVehicleEF	LHD1	9.6500e-004	0.01
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tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	3.7070e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.27	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9760e-003	6.3570e-003
tblVehicleEF	LHD1	3.5300e-004	1.0000e-004
tblVehicleEF	LHD1	3.7070e-003	0.04

tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	5.2170e-003	0.07
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tblVehicleEF	LHD1	0.02	0.01
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tblVehicleEF	LHD1	1.09	0.76
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tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
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tblVehicleEF	LHD1	4.1220e-003	0.04
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tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	0.25	0.07
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tblVehicleEF	LHD1	5.9770e-003	6.3570e-003
tblVehicleEF	LHD1	3.5000e-004	9.9000e-005
tblVehicleEF	LHD1	7.3080e-003	0.07
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	4.1220e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.36	0.50
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tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.1100e-003
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tblVehicleEF	LHD1	1.07	0.75
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tblVehicleEF	LHD1	30.40	10.07
tblVehicleEF	LHD1	0.09	1.05
tblVehicleEF	LHD1	2.08	1.23

tblVehicleEF	LHD1	0.97	0.28
tblVehicleEF	LHD1	9.6500e-004	0.01
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tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
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tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.7940e-003	0.02
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tblVehicleEF	LHD1	0.38	0.54
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tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
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tblVehicleEF	LHD1	3.5200e-004	1.0000e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.7940e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD2	3.5950e-003	0.05

tblVehicleEF	LHD2	4.6110e-003	4.1040e-003
tblVehicleEF	LHD2	8.1370e-003	8.8770e-003
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tblVehicleEF	LHD2	24.46	7.45
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tblVehicleEF	LHD2	0.53	0.19
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tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3070e-003	0.02
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.0300e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003

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tblVehicleEF	LHD2	2.6700e-004	7.4000e-005
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tblVehicleEF	LHD2	7.0300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
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tblVehicleEF	LHD2	7.7630e-003	8.5350e-003
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tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.13	0.54
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tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.40
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tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003

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tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
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tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6180e-003	4.1080e-003
tblVehicleEF	LHD2	8.0640e-003	8.8340e-003
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tblVehicleEF	LHD2	608.52	665.25

tblVehicleEF	LHD2	24.46	7.44
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tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	0.04	0.05
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tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.11	0.04
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tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	6.8700e-004	0.01
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tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.43	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	20.55	19.26
tblVehicleEF	MCY	9.93	8.60
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tblVehicleEF	MCY	1.16	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.23	2.33
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.16	1.84
tblVehicleEF	MCY	2.0770e-003	2.0980e-003
tblVehicleEF	MCY	6.9000e-004	6.0100e-004
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tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.74	2.87

tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.35	2.01
tblVehicleEF	MCY	0.00	2.28
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	20.68	19.28
tblVehicleEF	MCY	9.05	7.90
tblVehicleEF	MCY	167.73	211.90
tblVehicleEF	MCY	46.45	58.88
tblVehicleEF	MCY	0.99	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.17	2.28
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	1.86	1.62
tblVehicleEF	MCY	2.0770e-003	2.0970e-003
tblVehicleEF	MCY	6.6700e-004	5.8300e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.67	2.81

tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	2.02	1.76
tblVehicleEF	MCY	0.00	2.31
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.63	18.76
tblVehicleEF	MCY	9.55	8.44
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tblVehicleEF	MCY	46.45	60.38
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.19	2.31
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.08	1.81
tblVehicleEF	MCY	2.0610e-003	2.0900e-003
tblVehicleEF	MCY	6.8200e-004	5.9800e-004
tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.69	2.84

tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.27	1.98
tblVehicleEF	MDV	0.01	5.5200e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.35	1.13
tblVehicleEF	MDV	3.25	3.24
tblVehicleEF	MDV	483.94	412.47
tblVehicleEF	MDV	107.92	86.64
tblVehicleEF	MDV	0.17	0.11
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.8500e-003	4.0780e-003
tblVehicleEF	MDV	1.1370e-003	8.5700e-004
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.11	0.50

tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	0.01	6.2110e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.64	1.35
tblVehicleEF	MDV	2.69	2.71
tblVehicleEF	MDV	526.85	435.67
tblVehicleEF	MDV	107.92	85.59
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.30	0.35
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.03
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	5.2830e-003	4.3080e-003
tblVehicleEF	MDV	1.1260e-003	8.4700e-004
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.23	0.41

tblVehicleEF	MDV	0.01	5.4050e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.28	1.09
tblVehicleEF	MDV	3.20	3.25
tblVehicleEF	MDV	473.93	408.15
tblVehicleEF	MDV	107.92	86.67
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.7490e-003	4.0360e-003
tblVehicleEF	MDV	1.1360e-003	8.5800e-004
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.27	0.48
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.07	1.31
tblVehicleEF	MH	6.43	2.11
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.89
tblVehicleEF	MH	1.54	1.48
tblVehicleEF	MH	0.91	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0700e-004	1.8700e-004
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.14	0.09
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.40	0.11

tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.19	1.34
tblVehicleEF	MH	5.84	1.97
tblVehicleEF	MH	1,045.05	1,487.74
tblVehicleEF	MH	59.49	18.64
tblVehicleEF	MH	1.41	1.37
tblVehicleEF	MH	0.86	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.34	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9700e-004	1.8400e-004
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.49

tblVehicleEF	MH	0.38	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.08	1.31
tblVehicleEF	MH	6.36	2.12
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.90
tblVehicleEF	MH	1.51	1.45
tblVehicleEF	MH	0.89	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.8700e-004
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.15	0.09

tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5160e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9450e-003
tblVehicleEF	MHD	0.32	3.17
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.32	0.34
tblVehicleEF	MHD	156.91	758.35
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89
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tblVehicleEF	MHD	0.99	1.61
tblVehicleEF	MHD	11.88	1.62
tblVehicleEF	MHD	3.8600e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.6900e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02

tblVehicleEF	MHD	1.5080e-003	7.1830e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1700e-004	2.9000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5800e-003	3.3450e-003
tblVehicleEF	MHD	0.05	2.8280e-003
tblVehicleEF	MHD	0.24	2.75
tblVehicleEF	MHD	0.28	0.33
tblVehicleEF	MHD	4.97	0.32
tblVehicleEF	MHD	166.20	765.37
tblVehicleEF	MHD	1,101.52	974.58
tblVehicleEF	MHD	52.43	2.86
tblVehicleEF	MHD	0.62	5.74
tblVehicleEF	MHD	0.92	1.52
tblVehicleEF	MHD	11.85	1.62
tblVehicleEF	MHD	3.2500e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.1100e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03

tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.02	0.15
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.30	0.01
tblVehicleEF	MHD	1.5950e-003	7.2500e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1100e-004	2.8000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.33	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	3.5220e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9240e-003
tblVehicleEF	MHD	0.45	3.76
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.23	0.34
tblVehicleEF	MHD	144.06	748.63
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89

tblVehicleEF	MHD	0.57	5.74
tblVehicleEF	MHD	0.97	1.59
tblVehicleEF	MHD	11.87	1.62
tblVehicleEF	MHD	4.7000e-004	0.02
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	4.4900e-004	0.02
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.03	0.16
tblVehicleEF	MHD	6.4000e-004	2.2230e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02
tblVehicleEF	MHD	1.3860e-003	7.0900e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1600e-004	2.9000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.04	0.21
tblVehicleEF	MHD	6.4000e-004	2.2230e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	OBUS	0.01	0.12

tblVehicleEF	OBUS	9.9110e-003	6.5960e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	9.35
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.27	1.60
tblVehicleEF	OBUS	70.35	1,526.75
tblVehicleEF	OBUS	1,121.50	1,406.90
tblVehicleEF	OBUS	70.70	13.37
tblVehicleEF	OBUS	0.28	7.45
tblVehicleEF	OBUS	0.97	1.24
tblVehicleEF	OBUS	1.93	1.14
tblVehicleEF	OBUS	6.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	6.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.85
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.8400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1700e-004	1.3200e-004

tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.09
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
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tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	0.01	6.7350e-003
tblVehicleEF	OBUS	0.03	0.01
tblVehicleEF	OBUS	0.26	9.12
tblVehicleEF	OBUS	0.65	0.79
tblVehicleEF	OBUS	5.74	1.49
tblVehicleEF	OBUS	73.50	1,523.07
tblVehicleEF	OBUS	1,121.50	1,406.93
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tblVehicleEF	OBUS	0.29	7.27
tblVehicleEF	OBUS	0.90	1.16
tblVehicleEF	OBUS	1.88	1.13
tblVehicleEF	OBUS	5.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	5.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02

tblVehicleEF	OBUS	0.03	0.87
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.36	0.07
tblVehicleEF	OBUS	7.1400e-004	0.01
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tblVehicleEF	OBUS	8.0800e-004	1.3000e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.11
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.40	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	9.9380e-003	6.6000e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	9.66
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.22	1.60
tblVehicleEF	OBUS	66.00	1,531.82
tblVehicleEF	OBUS	1,121.50	1,406.90
tblVehicleEF	OBUS	70.70	13.38
tblVehicleEF	OBUS	0.27	7.69
tblVehicleEF	OBUS	0.96	1.22
tblVehicleEF	OBUS	1.91	1.14

tblVehicleEF	OBUS	7.7000e-005	0.02
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	7.4000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
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tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.4200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1600e-004	1.3200e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.07
tblVehicleEF	OBUS	9.4100e-004	0.02
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.20
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tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5840e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.71	29.13

tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.33	2.53
tblVehicleEF	SBUS	1,258.13	3,306.59
tblVehicleEF	SBUS	1,136.31	1,112.17
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tblVehicleEF	SBUS	4.77	5.20
tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9260e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.27	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6300e-004	1.4600e-004
tblVehicleEF	SBUS	2.9260e-003	0.02

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.30	0.12
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.7140e-003
tblVehicleEF	SBUS	0.06	0.02
tblVehicleEF	SBUS	5.56	28.79
tblVehicleEF	SBUS	0.66	0.80
tblVehicleEF	SBUS	3.65	1.83
tblVehicleEF	SBUS	1,322.00	3,377.53
tblVehicleEF	SBUS	1,136.31	1,112.20
tblVehicleEF	SBUS	37.11	13.58
tblVehicleEF	SBUS	12.08	30.14
tblVehicleEF	SBUS	4.47	4.88
tblVehicleEF	SBUS	14.99	0.82
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	9.6490e-003	0.03
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	5.6170e-003	0.03

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.67	3.37
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.22	0.09
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.3500e-004	1.3400e-004
tblVehicleEF	SBUS	5.6170e-003	0.03
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	8.5310e-003	0.18
tblVehicleEF	SBUS	0.24	0.10
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.5760e-003
tblVehicleEF	SBUS	0.07	0.02
tblVehicleEF	SBUS	5.91	29.60
tblVehicleEF	SBUS	0.65	0.78
tblVehicleEF	SBUS	5.37	2.65
tblVehicleEF	SBUS	1,169.92	3,208.62
tblVehicleEF	SBUS	1,136.31	1,112.17
tblVehicleEF	SBUS	37.11	14.94
tblVehicleEF	SBUS	11.19	28.66
tblVehicleEF	SBUS	4.69	5.12

tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.28	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6400e-004	1.4800e-004
tblVehicleEF	SBUS	2.9580e-003	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.98	4.87
tblVehicleEF	SBUS	1.2820e-003	7.4050e-003
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	0.01	0.24
tblVehicleEF	SBUS	0.31	0.12
tblVehicleEF	UBUS	1.83	4.45

tblVehicleEF	UBUS	0.08	9.1680e-003
tblVehicleEF	UBUS	9.26	34.75
tblVehicleEF	UBUS	14.34	0.80
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.61
tblVehicleEF	UBUS	5.87	0.38
tblVehicleEF	UBUS	13.57	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.15	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6240e-003	1.0500e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
tblVehicleEF	UBUS	2.50	4.54

tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.25	0.04
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	8.3240e-003
tblVehicleEF	UBUS	9.36	34.75
tblVehicleEF	UBUS	11.74	0.68
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.41
tblVehicleEF	UBUS	5.45	0.38
tblVehicleEF	UBUS	13.45	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	0.02	8.0540e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	0.62	0.07
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.02	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.5790e-003	1.0300e-004
tblVehicleEF	UBUS	0.02	8.0540e-003

tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	2.52	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.12	0.03
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	9.2430e-003
tblVehicleEF	UBUS	9.27	34.75
tblVehicleEF	UBUS	13.86	0.81
tblVehicleEF	UBUS	1,846.39	1,692.13
tblVehicleEF	UBUS	136.37	10.63
tblVehicleEF	UBUS	5.76	0.38
tblVehicleEF	UBUS	13.55	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.13	0.03

tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6160e-003	1.0500e-004
tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	2.50	4.54
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.24	0.04
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.40
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.0063	40.5566	37.1038	0.0668	18.2675	2.0458	20.3132	9.9840	1.8821	11.8661	0.0000	6,469.5424	6,469.5424	1.4037	0.0000	6,504.6350
2022	7.6059	29.5661	36.4818	0.0664	1.3288	1.4681	2.7969	0.3541	1.3741	1.7283	0.0000	6,428.6329	6,428.6329	1.3949	0.0000	6,463.5045
Maximum	**8.0063**	**40.5566**	**37.1038**	**0.0668**	**18.2675**	**2.0458**	**20.3132**	**9.9840**	**1.8821**	**11.8661**	**0.0000**	**6,469.5424**	**6,469.5424**	**1.4037**	**0.0000**	**6,504.6350**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.0063	40.5566	37.1038	0.0668	6.8843	2.0458	8.9300	3.7301	1.8821	5.6122	0.0000	6,469.5424	6,469.5424	1.4037	0.0000	6,504.6350
2022	7.6059	29.5661	36.4818	0.0664	1.2602	1.4681	2.7283	0.3373	1.3741	1.7115	0.0000	6,428.6329	6,428.6329	1.3949	0.0000	6,463.5045
Maximum	**8.0063**	**40.5566**	**37.1038**	**0.0668**	**6.8843**	**2.0458**	**8.9300**	**3.7301**	**1.8821**	**5.6122**	**0.0000**	**6,469.5424**	**6,469.5424**	**1.4037**	**0.0000**	**6,504.6350**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**58.44**	**0.00**	**49.55**	**60.66**	**0.00**	**46.13**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	31.3013	2.3991	63.4824	0.1457		8.5915	8.5915		8.5915	8.5915	1,049.0949	2,027.7356	3,076.8305	3.1399	0.0712	3,176.5478
Energy	0.0364	0.3107	0.1322	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.5787	396.5787	7.6000e-003	7.2700e-003	398.9354
Mobile	2.4468	9.8948	19.3233	0.0551	4.2116	0.0564	4.2680	1.1256	0.0564	1.1820		5,771.2819	5,771.2819	0.3604		5,780.2919
Total	**33.7844**	**12.6045**	**82.9379**	**0.2027**	**4.2116**	**8.6731**	**12.8847**	**1.1256**	**8.6731**	**9.7987**	**1,049.0949**	**8,195.5963**	**9,244.6911**	**3.5079**	**0.0785**	**9,355.7751**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9533	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361	0.0000	11.7356	11.7356	0.0113	0.0000	12.0187
Energy	0.0246	0.2098	0.0893	1.3400e-003		0.0170	0.0170		0.0170	0.0170		267.7703	267.7703	5.1300e-003	4.9100e-003	269.3615
Mobile	2.4468	9.8948	19.3233	0.0551	4.2116	0.0564	4.2680	1.1256	0.0564	1.1820		5,771.2819	5,771.2819	0.3604		5,780.2919
Total	**4.4246**	**10.1798**	**25.9372**	**0.0567**	**4.2116**	**0.1095**	**4.3211**	**1.1256**	**0.1094**	**1.2350**	**0.0000**	**6,050.7878**	**6,050.7878**	**0.3769**	**4.9100e-003**	**6,061.6721**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**86.90**	**19.24**	**68.73**	**72.01**	**0.00**	**98.74**	**66.46**	**0.00**	**98.74**	**87.40**	**100.00**	**26.17**	**34.55**	**89.26**	**93.74**	**35.21**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	6/1/2021	1/28/2022	5	174	
6	Architectural Coating	Architectural Coating	6/1/2021	1/28/2022	5	174	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 226,800; Residential Outdoor: 75,600; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	115.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7087	0.0000	0.7087	0.1073	0.0000	0.1073			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.7087**	**1.5513**	**2.2601**	**0.1073**	**1.4411**	**1.5484**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0357	1.3164	0.2320	4.3500e-003	0.1006	3.7600e-003	0.1044	0.0276	3.6000e-003	0.0312		462.0492	462.0492	0.0276		462.7397
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.1121**	**1.3660**	**0.7413**	**5.8300e-003**	**0.2683**	**4.8300e-003**	**0.2731**	**0.0721**	**4.5900e-003**	**0.0766**		**609.2738**	**609.2738**	**0.0317**		**610.0668**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2626	0.0000	0.2626	0.0398	0.0000	0.0398			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.2626**	**1.5513**	**1.8139**	**0.0398**	**1.4411**	**1.4809**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0357	1.3164	0.2320	4.3500e-003	0.0961	3.7600e-003	0.0998	0.0265	3.6000e-003	0.0301		462.0492	462.0492	0.0276		462.7397
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.1121**	**1.3660**	**0.7413**	**5.8300e-003**	**0.2550**	**4.8300e-003**	**0.2598**	**0.0688**	**4.5900e-003**	**0.0734**		**609.2738**	**609.2738**	**0.0317**		**610.0668**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0917	0.0595	0.6112	1.7700e-003	0.2012	1.2900e-003	0.2025	0.0534	1.1900e-003	0.0545		176.6696	176.6696	4.9200e-003		176.7925
Total	**0.0917**	**0.0595**	**0.6112**	**1.7700e-003**	**0.2012**	**1.2900e-003**	**0.2025**	**0.0534**	**1.1900e-003**	**0.0545**		**176.6696**	**176.6696**	**4.9200e-003**		**176.7925**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6936	0.0000	6.6936	3.6793	0.0000	3.6793			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**6.6936**	**2.0445**	**8.7380**	**3.6793**	**1.8809**	**5.5602**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0917	0.0595	0.6112	1.7700e-003	0.1907	1.2900e-003	0.1920	0.0508	1.1900e-003	0.0520		176.6696	176.6696	4.9200e-003		176.7925
Total	**0.0917**	**0.0595**	**0.6112**	**1.7700e-003**	**0.1907**	**1.2900e-003**	**0.1920**	**0.0508**	**1.1900e-003**	**0.0520**		**176.6696**	**176.6696**	**4.9200e-003**		**176.7925**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5523**	**1.1599**	**7.7123**	**3.3675**	**1.0671**	**4.4346**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4276	0.0000	2.4276	1.2477	0.0000	1.2477			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**2.4276**	**1.1599**	**3.5876**	**1.2477**	**1.0671**	**2.3148**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0329	1.1449	0.2547	3.1100e-003	0.0769	2.0400e-003	0.0789	0.0221	1.9500e-003	0.0241		328.2422	328.2422	0.0239		328.8402
Worker	0.4125	0.2676	2.7504	7.9800e-003	0.9054	5.7900e-003	0.9112	0.2401	5.3300e-003	0.2455		795.0131	795.0131	0.0221		795.5664
Total	**0.4454**	**1.4125**	**3.0051**	**0.0111**	**0.9823**	**7.8300e-003**	**0.9901**	**0.2622**	**7.2800e-003**	**0.2695**		**1,123.2553**	**1,123.2553**	**0.0461**		**1,124.4065**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0329	1.1449	0.2547	3.1100e-003	0.0736	2.0400e-003	0.0756	0.0213	1.9500e-003	0.0233		328.2422	328.2422	0.0239		328.8402
Worker	0.4125	0.2676	2.7504	7.9800e-003	0.8582	5.7900e-003	0.8640	0.2285	5.3300e-003	0.2339		795.0131	795.0131	0.0221		795.5664
Total	**0.4454**	**1.4125**	**3.0051**	**0.0111**	**0.9317**	**7.8300e-003**	**0.9396**	**0.2498**	**7.2800e-003**	**0.2571**		**1,123.2553**	**1,123.2553**	**0.0461**		**1,124.4065**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0307	1.0846	0.2365	3.0800e-003	0.0769	1.7200e-003	0.0786	0.0221	1.6400e-003	0.0238		325.5075	325.5075	0.0231		326.0857
Worker	0.3862	0.2405	2.5225	7.6900e-003	0.9054	5.6200e-003	0.9110	0.2401	5.1800e-003	0.2453		766.3783	766.3783	0.0199		766.8748
Total	**0.4169**	**1.3251**	**2.7590**	**0.0108**	**0.9823**	**7.3400e-003**	**0.9896**	**0.2622**	**6.8200e-003**	**0.2691**		**1,091.8858**	**1,091.8858**	**0.0430**		**1,092.9605**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0307	1.0846	0.2365	3.0800e-003	0.0736	1.7200e-003	0.0753	0.0213	1.6400e-003	0.0230		325.5075	325.5075	0.0231		326.0857
Worker	0.3862	0.2405	2.5225	7.6900e-003	0.8582	5.6200e-003	0.8638	0.2285	5.1800e-003	0.2337		766.3783	766.3783	0.0199		766.8748
Total	**0.4169**	**1.3251**	**2.7590**	**0.0108**	**0.9317**	**7.3400e-003**	**0.9391**	**0.2498**	**6.8200e-003**	**0.2567**		**1,091.8858**	**1,091.8858**	**0.0430**		**1,092.9605**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0764	0.0496	0.5093	1.4800e-003	0.1589	1.0700e-003	0.1600	0.0423	9.9000e-004	0.0433		147.2247	147.2247	4.1000e-003		147.3271
Total	**0.0764**	**0.0496**	**0.5093**	**1.4800e-003**	**0.1589**	**1.0700e-003**	**0.1600**	**0.0423**	**9.9000e-004**	**0.0433**		**147.2247**	**147.2247**	**4.1000e-003**		**147.3271**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0445	0.4671	1.4200e-003	0.1677	1.0400e-003	0.1687	0.0445	9.6000e-004	0.0454		141.9219	141.9219	3.6800e-003		142.0139
Total	**0.0715**	**0.0445**	**0.4671**	**1.4200e-003**	**0.1677**	**1.0400e-003**	**0.1687**	**0.0445**	**9.6000e-004**	**0.0454**		**141.9219**	**141.9219**	**3.6800e-003**		**142.0139**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0445	0.4671	1.4200e-003	0.1589	1.0400e-003	0.1600	0.0423	9.6000e-004	0.0433		141.9219	141.9219	3.6800e-003		142.0139
Total	**0.0715**	**0.0445**	**0.4671**	**1.4200e-003**	**0.1589**	**1.0400e-003**	**0.1600**	**0.0423**	**9.6000e-004**	**0.0433**		**141.9219**	**141.9219**	**3.6800e-003**		**142.0139**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**4.2466**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0815	0.0529	0.5433	1.5800e-003	0.1788	1.1400e-003	0.1800	0.0474	1.0500e-003	0.0485		157.0396	157.0396	4.3700e-003		157.1489
Total	**0.0815**	**0.0529**	**0.5433**	**1.5800e-003**	**0.1788**	**1.1400e-003**	**0.1800**	**0.0474**	**1.0500e-003**	**0.0485**		**157.0396**	**157.0396**	**4.3700e-003**		**157.1489**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**4.2466**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0815	0.0529	0.5433	1.5800e-003	0.1695	1.1400e-003	0.1707	0.0451	1.0500e-003	0.0462		157.0396	157.0396	4.3700e-003		157.1489
Total	**0.0815**	**0.0529**	**0.5433**	**1.5800e-003**	**0.1695**	**1.1400e-003**	**0.1707**	**0.0451**	**1.0500e-003**	**0.0462**		**157.0396**	**157.0396**	**4.3700e-003**		**157.1489**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**4.2322**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0475	0.4983	1.5200e-003	0.1788	1.1100e-003	0.1800	0.0474	1.0200e-003	0.0485		151.3834	151.3834	3.9200e-003		151.4814
Total	**0.0763**	**0.0475**	**0.4983**	**1.5200e-003**	**0.1788**	**1.1100e-003**	**0.1800**	**0.0474**	**1.0200e-003**	**0.0485**		**151.3834**	**151.3834**	**3.9200e-003**		**151.4814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.0277					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**4.2322**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0475	0.4983	1.5200e-003	0.1695	1.1100e-003	0.1706	0.0451	1.0200e-003	0.0462		151.3834	151.3834	3.9200e-003		151.4814
Total	**0.0763**	**0.0475**	**0.4983**	**1.5200e-003**	**0.1695**	**1.1100e-003**	**0.1706**	**0.0451**	**1.0200e-003**	**0.0462**		**151.3834**	**151.3834**	**3.9200e-003**		**151.4814**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4468	9.8948	19.3233	0.0551	4.2116	0.0564	4.2680	1.1256	0.0564	1.1820		5,771.2819	5,771.2819	0.3604		5,780.2919
Unmitigated	2.4468	9.8948	19.3233	0.0551	4.2116	0.0564	4.2680	1.1256	0.0564	1.1820		5,771.2819	5,771.2819	0.3604		5,780.2919

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	578.28	578.28	578.28	1,979,359	1,979,359
Total	578.28	578.28	578.28	1,979,359	1,979,359

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.40	19.00	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0246	0.2098	0.0893	1.3400e-003		0.0170	0.0170		0.0170	0.0170		267.7703	267.7703	5.1300e-003	4.9100e-003	269.3615
NaturalGas Unmitigated	0.0364	0.3107	0.1322	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.5787	396.5787	7.6000e-003	7.2700e-003	398.9354

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	3370.92	0.0364	0.3107	0.1322	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.5787	396.5787	7.6000e-003	7.2700e-003	398.9354
Total		**0.0364**	**0.3107**	**0.1322**	**1.9800e-003**		**0.0251**	**0.0251**		**0.0251**	**0.0251**		**396.5787**	**396.5787**	**7.6000e-003**	**7.2700e-003**	**398.9354**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	2.27605	0.0246	0.2098	0.0893	1.3400e-003		0.0170	0.0170		0.0170	0.0170		267.7703	267.7703	5.1300e-003	4.9100e-003	269.3615
Total		**0.0246**	**0.2098**	**0.0893**	**1.3400e-003**		**0.0170**	**0.0170**		**0.0170**	**0.0170**		**267.7703**	**267.7703**	**5.1300e-003**	**4.9100e-003**	**269.3615**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9533	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361	0.0000	11.7356	11.7356	0.0113	0.0000	12.0187
Unmitigated	31.3013	2.3991	63.4824	0.1457		8.5915	8.5915		8.5915	8.5915	1,049.0949	2,027.7356	3,076.8305	3.1399	0.0712	3,176.5478

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	29.3480	2.3238	56.9578	0.1453		8.5555	8.5555		8.5555	8.5555	1,049.0949	2,016.0000	3,065.0949	3.1286	0.0712	3,164.5291
Landscaping	0.1971	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361		11.7356	11.7356	0.0113		12.0187
Total	**31.3013**	**2.3991**	**63.4824**	**0.1456**		**8.5915**	**8.5915**		**8.5915**	**8.5915**	**1,049.0949**	**2,027.7356**	**3,076.8305**	**3.1399**	**0.0712**	**3,176.5478**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1971	0.0753	6.5246	3.4000e-004		0.0361	0.0361		0.0361	0.0361		11.7356	11.7356	0.0113		12.0187
Total	**1.9533**	**0.0753**	**6.5246**	**3.4000e-004**		**0.0361**	**0.0361**		**0.0361**	**0.0361**	**0.0000**	**11.7356**	**11.7356**	**0.0113**	**0.0000**	**12.0187**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sierra Casa Grande - Palmetto - Replacement Site

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	79.00	Dwelling Unit	3.58	79,000.00	226

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	510.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sierra Casa Grande - Palmetto - Replacement Site - San Bernardino-South Coast County, Annual

Project Characteristics - Adjusted per the SCE 2018 Corporate Responsibility and Sustainability Report. The report provides intensity factor of CO2e, the CO2 intensity factor is calculated as 513-25*0.029-298*0.00617=510.4363 to avoid double counting.

Land Use - based on Traffic Memo, lot size is 3.58 acres

Construction Phase - Building Construction, Paving, and Architectural Coating activities are expected to overlap.

Demolition - default squarefootage determined for existing site based on 8 single family units

Vehicle Trips - Based on Traffic Memo, 7.32, CalEEMod trip % error

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Vehicle Emission Factors - EMFAC 2017 - 2022 San Bernardino County SC

Energy Use -

Construction Off-road Equipment Mitigation - RULE 402

Area Mitigation -

Energy Mitigation - CEC - homes built under 2019 standards will use about 53% less energy than those under the 2016 standard

Water Mitigation - Low flow fixtures

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	174.00
tblConstructionPhase	NumDays	20.00	174.00
tblLandUse	LotAcreage	4.94	3.58
tblProjectCharacteristics	CO2IntensityFactor	702.44	510.44
tblVehicleEF	HHD	1.21	0.24
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.29	60.12

tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.82	1.3410e-003
tblVehicleEF	HHD	6,933.41	11,330.49
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	26.50	61.17
tblVehicleEF	HHD	2.50	3.42
tblVehicleEF	HHD	20.21	2.11
tblVehicleEF	HHD	9.7780e-003	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	9.3550e-003	0.03
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.84	4.41
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	8.6000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.6000e-005
tblVehicleEF	HHD	3.1910e-003	5.7000e-005
tblVehicleEF	HHD	0.97	5.05
tblVehicleEF	HHD	5.2000e-005	2.1000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.1700e-004	2.8000e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.14	0.25
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.09	0.00
tblVehicleEF	HHD	2.39	58.80
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.70	1.2660e-003
tblVehicleEF	HHD	7,345.18	11,296.84
tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	27.35	59.38
tblVehicleEF	HHD	2.36	3.23
tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	8.2750e-003	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	7.9170e-003	0.03
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	1.6800e-004	7.0000e-005
tblVehicleEF	HHD	3.5970e-003	6.4000e-005
tblVehicleEF	HHD	0.79	4.61
tblVehicleEF	HHD	1.1700e-004	4.7000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.2100e-004	2.8700e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.07	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.4000e-005	0.00
tblVehicleEF	HHD	1.6800e-004	7.0000e-005
tblVehicleEF	HHD	3.5970e-003	6.4000e-005
tblVehicleEF	HHD	0.91	5.28
tblVehicleEF	HHD	1.1700e-004	4.7000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.2100e-004	2.8700e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.31	0.22
tblVehicleEF	HHD	0.04	0.14
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	4.53	61.95
tblVehicleEF	HHD	0.57	0.67
tblVehicleEF	HHD	1.79	1.3300e-003
tblVehicleEF	HHD	6,364.76	11,376.96

tblVehicleEF	HHD	1,475.79	1,484.27
tblVehicleEF	HHD	5.54	0.01
tblVehicleEF	HHD	25.32	63.63
tblVehicleEF	HHD	2.46	3.37
tblVehicleEF	HHD	20.20	2.11
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	5.1000e-005	0.00
tblVehicleEF	HHD	0.01	0.04
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8810e-003	8.8310e-003
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	4.7000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005
tblVehicleEF	HHD	0.91	4.13
tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.05	0.00
tblVehicleEF	HHD	0.06	0.11
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	8.5000e-005	0.00
tblVehicleEF	HHD	8.5000e-005	3.8000e-005
tblVehicleEF	HHD	3.4760e-003	6.6000e-005

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tblVehicleEF	HHD	5.2000e-005	2.2000e-005
tblVehicleEF	HHD	0.13	0.23
tblVehicleEF	HHD	2.3300e-004	2.9300e-004
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	LDA	4.2030e-003	2.5110e-003
tblVehicleEF	LDA	5.6230e-003	0.05
tblVehicleEF	LDA	0.57	0.67
tblVehicleEF	LDA	1.19	2.11
tblVehicleEF	LDA	251.29	263.44
tblVehicleEF	LDA	57.15	53.83
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.04	0.28
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.01	9.5370e-003
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.22
tblVehicleEF	LDA	2.5170e-003	2.6060e-003
tblVehicleEF	LDA	5.9200e-004	5.3300e-004
tblVehicleEF	LDA	0.04	0.28
tblVehicleEF	LDA	0.10	0.10

tblVehicleEF	LDA	0.03	0.23
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.08	0.24
tblVehicleEF	LDA	4.7900e-003	2.8350e-003
tblVehicleEF	LDA	4.6890e-003	0.04
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	0.99	1.78
tblVehicleEF	LDA	274.94	285.26
tblVehicleEF	LDA	57.15	53.19
tblVehicleEF	LDA	0.05	0.03
tblVehicleEF	LDA	0.07	0.17
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.09	0.53
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.7550e-003	2.8220e-003
tblVehicleEF	LDA	5.8800e-004	5.2600e-004
tblVehicleEF	LDA	0.09	0.53
tblVehicleEF	LDA	0.12	0.11
tblVehicleEF	LDA	0.07	0.42

tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.21
tblVehicleEF	LDA	0.07	0.21
tblVehicleEF	LDA	4.0860e-003	2.4590e-003
tblVehicleEF	LDA	5.5870e-003	0.05
tblVehicleEF	LDA	0.54	0.64
tblVehicleEF	LDA	1.18	2.11
tblVehicleEF	LDA	245.70	259.38
tblVehicleEF	LDA	57.15	53.84
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.08	0.18
tblVehicleEF	LDA	1.6780e-003	1.5180e-003
tblVehicleEF	LDA	2.2790e-003	1.8560e-003
tblVehicleEF	LDA	1.5460e-003	1.3980e-003
tblVehicleEF	LDA	2.0960e-003	1.7060e-003
tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	9.3400e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.22
tblVehicleEF	LDA	2.4600e-003	2.5660e-003
tblVehicleEF	LDA	5.9100e-004	5.3300e-004
tblVehicleEF	LDA	0.05	0.27
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.01	0.01

tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.24
tblVehicleEF	LDT1	0.01	7.5760e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.54	1.52
tblVehicleEF	LDT1	3.61	2.38
tblVehicleEF	LDT1	313.68	312.60
tblVehicleEF	LDT1	70.93	65.25
tblVehicleEF	LDT1	0.16	0.13
tblVehicleEF	LDT1	0.22	0.30
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.20	0.86
tblVehicleEF	LDT1	0.26	0.42
tblVehicleEF	LDT1	3.1570e-003	3.0930e-003
tblVehicleEF	LDT1	7.7300e-004	6.4600e-004
tblVehicleEF	LDT1	0.18	0.86
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.13	0.61
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.20	0.86

tblVehicleEF	LDT1	0.28	0.46
tblVehicleEF	LDT1	0.02	8.4640e-003
tblVehicleEF	LDT1	0.02	0.07
tblVehicleEF	LDT1	1.85	1.80
tblVehicleEF	LDT1	2.97	2.00
tblVehicleEF	LDT1	341.75	335.30
tblVehicleEF	LDT1	70.93	64.44
tblVehicleEF	LDT1	0.14	0.11
tblVehicleEF	LDT1	0.20	0.28
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.21	0.36
tblVehicleEF	LDT1	3.4420e-003	3.3180e-003
tblVehicleEF	LDT1	7.6200e-004	6.3800e-004
tblVehicleEF	LDT1	0.37	1.63
tblVehicleEF	LDT1	0.41	0.31
tblVehicleEF	LDT1	0.27	1.16
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.20	0.85
tblVehicleEF	LDT1	0.23	0.40

tblVehicleEF	LDT1	0.01	7.4310e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.47	1.46
tblVehicleEF	LDT1	3.55	2.39
tblVehicleEF	LDT1	307.06	308.38
tblVehicleEF	LDT1	70.93	65.27
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.21	0.29
tblVehicleEF	LDT1	2.7050e-003	2.3390e-003
tblVehicleEF	LDT1	3.6920e-003	2.8330e-003
tblVehicleEF	LDT1	2.4910e-003	2.1530e-003
tblVehicleEF	LDT1	3.3960e-003	2.6050e-003
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.25	0.43
tblVehicleEF	LDT1	3.0890e-003	3.0520e-003
tblVehicleEF	LDT1	7.7200e-004	6.4600e-004
tblVehicleEF	LDT1	0.19	0.85
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.58
tblVehicleEF	LDT1	0.05	0.05
tblVehicleEF	LDT1	0.23	1.00
tblVehicleEF	LDT1	0.28	0.47
tblVehicleEF	LDT2	6.3270e-003	4.4090e-003

tblVehicleEF	LDT2	8.1990e-003	0.07
tblVehicleEF	LDT2	0.80	1.00
tblVehicleEF	LDT2	1.67	2.71
tblVehicleEF	LDT2	351.15	333.43
tblVehicleEF	LDT2	79.39	69.90
tblVehicleEF	LDT2	0.09	0.09
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.11	0.33
tblVehicleEF	LDT2	3.5180e-003	3.2990e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.45
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.05	0.38
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.12	0.36
tblVehicleEF	LDT2	7.1840e-003	4.9540e-003
tblVehicleEF	LDT2	6.8290e-003	0.06

tblVehicleEF	LDT2	0.97	1.19
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tblVehicleEF	LDT2	383.36	355.41
tblVehicleEF	LDT2	79.39	69.05
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.13	0.28
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8420e-003	3.5160e-003
tblVehicleEF	LDT2	8.1700e-004	6.8300e-004
tblVehicleEF	LDT2	0.13	0.85
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.11	0.71
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.07	0.45
tblVehicleEF	LDT2	0.10	0.31
tblVehicleEF	LDT2	6.1560e-003	4.3220e-003
tblVehicleEF	LDT2	8.1410e-003	0.07
tblVehicleEF	LDT2	0.75	0.96

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tblVehicleEF	LDT2	79.39	69.92
tblVehicleEF	LDT2	0.08	0.08
tblVehicleEF	LDT2	0.14	0.30
tblVehicleEF	LDT2	1.7270e-003	1.5990e-003
tblVehicleEF	LDT2	2.4170e-003	1.9230e-003
tblVehicleEF	LDT2	1.5880e-003	1.4710e-003
tblVehicleEF	LDT2	2.2220e-003	1.7680e-003
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.11	0.34
tblVehicleEF	LDT2	3.4410e-003	3.2580e-003
tblVehicleEF	LDT2	8.2200e-004	6.9200e-004
tblVehicleEF	LDT2	0.06	0.43
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	0.05	0.37
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.08	0.53
tblVehicleEF	LDT2	0.12	0.37
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.1020e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42

tblVehicleEF	LHD1	1.07	0.75
tblVehicleEF	LHD1	2.60	0.93
tblVehicleEF	LHD1	9.23	128.40
tblVehicleEF	LHD1	609.20	652.45
tblVehicleEF	LHD1	30.40	10.08
tblVehicleEF	LHD1	0.09	1.05
tblVehicleEF	LHD1	2.12	1.25
tblVehicleEF	LHD1	0.99	0.29
tblVehicleEF	LHD1	9.6500e-004	0.01
tblVehicleEF	LHD1	0.01	9.8770e-003
tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	3.7070e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.27	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9760e-003	6.3570e-003
tblVehicleEF	LHD1	3.5300e-004	1.0000e-004
tblVehicleEF	LHD1	3.7070e-003	0.04

tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.8240e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.35	0.50
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.2280e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42
tblVehicleEF	LHD1	1.09	0.76
tblVehicleEF	LHD1	2.43	0.88
tblVehicleEF	LHD1	9.23	128.40
tblVehicleEF	LHD1	609.20	652.47
tblVehicleEF	LHD1	30.40	10.00
tblVehicleEF	LHD1	0.09	1.05
tblVehicleEF	LHD1	1.98	1.17
tblVehicleEF	LHD1	0.94	0.28
tblVehicleEF	LHD1	9.6500e-004	0.01
tblVehicleEF	LHD1	0.01	9.8770e-003
tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
tblVehicleEF	LHD1	2.5390e-003	2.4690e-003
tblVehicleEF	LHD1	0.01	9.3750e-003
tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	7.3080e-003	0.07

tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	4.1220e-003	0.04
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
tblVehicleEF	LHD1	5.9770e-003	6.3570e-003
tblVehicleEF	LHD1	3.5000e-004	9.9000e-005
tblVehicleEF	LHD1	7.3080e-003	0.07
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	4.1220e-003	0.04
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.36	0.50
tblVehicleEF	LHD1	0.28	0.07
tblVehicleEF	LHD1	5.2170e-003	0.07
tblVehicleEF	LHD1	0.01	6.1100e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	2.42
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tblVehicleEF	LHD1	2.55	0.92
tblVehicleEF	LHD1	9.23	128.40
tblVehicleEF	LHD1	609.20	652.45
tblVehicleEF	LHD1	30.40	10.07
tblVehicleEF	LHD1	0.09	1.05
tblVehicleEF	LHD1	2.08	1.23

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tblVehicleEF	LHD1	9.6500e-004	0.01
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tblVehicleEF	LHD1	0.01	9.8260e-003
tblVehicleEF	LHD1	9.5800e-004	2.3300e-004
tblVehicleEF	LHD1	9.2400e-004	0.01
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tblVehicleEF	LHD1	8.8100e-004	2.1500e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.29
tblVehicleEF	LHD1	1.7940e-003	0.02
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.26	0.07
tblVehicleEF	LHD1	9.2000e-005	1.2420e-003
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tblVehicleEF	LHD1	3.5200e-004	1.0000e-004
tblVehicleEF	LHD1	4.0430e-003	0.04
tblVehicleEF	LHD1	0.13	0.09
tblVehicleEF	LHD1	0.02	0.40
tblVehicleEF	LHD1	1.7940e-003	0.02
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.38	0.54
tblVehicleEF	LHD1	0.29	0.08
tblVehicleEF	LHD2	3.5950e-003	0.05

tblVehicleEF	LHD2	4.6110e-003	4.1040e-003
tblVehicleEF	LHD2	8.1370e-003	8.8770e-003
tblVehicleEF	LHD2	0.12	1.89
tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.20	0.57
tblVehicleEF	LHD2	14.27	191.37
tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.45
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.49	1.36
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	7.0300e-004	0.01
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tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003

tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6700e-004	7.4000e-005
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tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	7.0300e-004	0.01
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
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tblVehicleEF	LHD2	7.7630e-003	8.5350e-003
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tblVehicleEF	LHD2	0.50	0.50
tblVehicleEF	LHD2	1.13	0.54
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tblVehicleEF	LHD2	608.52	665.25
tblVehicleEF	LHD2	24.46	7.40
tblVehicleEF	LHD2	0.11	1.45
tblVehicleEF	LHD2	1.40	1.28
tblVehicleEF	LHD2	0.50	0.18
tblVehicleEF	LHD2	1.2830e-003	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003

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tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	2.5220e-003	0.04
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
tblVehicleEF	LHD2	2.6500e-004	7.3000e-005
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tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	1.5220e-003	0.02
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.05
tblVehicleEF	LHD2	3.5950e-003	0.05
tblVehicleEF	LHD2	4.6180e-003	4.1080e-003
tblVehicleEF	LHD2	8.0640e-003	8.8340e-003
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tblVehicleEF	LHD2	1.19	0.57
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tblVehicleEF	LHD2	608.52	665.25

tblVehicleEF	LHD2	24.46	7.44
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tblVehicleEF	LHD2	1.46	1.33
tblVehicleEF	LHD2	0.52	0.19
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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.0000e-004	1.1600e-004
tblVehicleEF	LHD2	1.2280e-003	0.02
tblVehicleEF	LHD2	2.6860e-003	2.6560e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.6800e-004	1.0700e-004
tblVehicleEF	LHD2	1.3460e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.23
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.3900e-004	1.8310e-003
tblVehicleEF	LHD2	5.9200e-003	6.4300e-003
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tblVehicleEF	LHD2	1.3460e-003	0.02
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.31
tblVehicleEF	LHD2	6.8700e-004	0.01
tblVehicleEF	LHD2	0.07	0.07

tblVehicleEF	LHD2	0.10	0.29
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.00	2.33
tblVehicleEF	MCY	0.43	0.34
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	20.55	19.26
tblVehicleEF	MCY	9.93	8.60
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tblVehicleEF	MCY	46.45	60.73
tblVehicleEF	MCY	1.16	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.23	2.33
tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.16	1.84
tblVehicleEF	MCY	2.0770e-003	2.0980e-003
tblVehicleEF	MCY	6.9000e-004	6.0100e-004
tblVehicleEF	MCY	1.45	2.85
tblVehicleEF	MCY	0.84	0.80
tblVehicleEF	MCY	0.80	1.56
tblVehicleEF	MCY	2.74	2.87

tblVehicleEF	MCY	0.49	1.91
tblVehicleEF	MCY	2.35	2.01
tblVehicleEF	MCY	0.00	2.28
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.14	0.21
tblVehicleEF	MCY	20.68	19.28
tblVehicleEF	MCY	9.05	7.90
tblVehicleEF	MCY	167.73	211.90
tblVehicleEF	MCY	46.45	58.88
tblVehicleEF	MCY	0.99	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
tblVehicleEF	MCY	3.4650e-003	2.7870e-003
tblVehicleEF	MCY	3.14	5.54
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tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.17	2.28
tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	1.86	1.62
tblVehicleEF	MCY	2.0770e-003	2.0970e-003
tblVehicleEF	MCY	6.6700e-004	5.8300e-004
tblVehicleEF	MCY	3.14	5.54
tblVehicleEF	MCY	1.27	1.11
tblVehicleEF	MCY	2.13	3.54
tblVehicleEF	MCY	2.67	2.81

tblVehicleEF	MCY	0.49	1.88
tblVehicleEF	MCY	2.02	1.76
tblVehicleEF	MCY	0.00	2.31
tblVehicleEF	MCY	0.42	0.34
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.63	18.76
tblVehicleEF	MCY	9.55	8.44
tblVehicleEF	MCY	167.73	211.17
tblVehicleEF	MCY	46.45	60.38
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8610e-003	1.9650e-003
tblVehicleEF	MCY	3.6730e-003	2.9600e-003
tblVehicleEF	MCY	1.7420e-003	1.8380e-003
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tblVehicleEF	MCY	0.72	1.49
tblVehicleEF	MCY	2.19	2.31
tblVehicleEF	MCY	0.56	2.18
tblVehicleEF	MCY	2.08	1.81
tblVehicleEF	MCY	2.0610e-003	2.0900e-003
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tblVehicleEF	MCY	1.71	3.15
tblVehicleEF	MCY	1.13	1.06
tblVehicleEF	MCY	0.72	1.49
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tblVehicleEF	MDV	3.25	3.24
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tblVehicleEF	MDV	0.17	0.11
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
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tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.44
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tblVehicleEF	MDV	1.1370e-003	8.5700e-004
tblVehicleEF	MDV	0.10	0.52
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.08	0.47
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.11	0.50

tblVehicleEF	MDV	0.28	0.48
tblVehicleEF	MDV	0.01	6.2110e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.64	1.35
tblVehicleEF	MDV	2.69	2.71
tblVehicleEF	MDV	526.85	435.67
tblVehicleEF	MDV	107.92	85.59
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.30	0.35
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.03
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	5.2830e-003	4.3080e-003
tblVehicleEF	MDV	1.1260e-003	8.4700e-004
tblVehicleEF	MDV	0.20	0.97
tblVehicleEF	MDV	0.23	0.19
tblVehicleEF	MDV	0.17	0.85
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.49
tblVehicleEF	MDV	0.23	0.41

tblVehicleEF	MDV	0.01	5.4050e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.28	1.09
tblVehicleEF	MDV	3.20	3.25
tblVehicleEF	MDV	473.93	408.15
tblVehicleEF	MDV	107.92	86.67
tblVehicleEF	MDV	0.16	0.10
tblVehicleEF	MDV	0.32	0.38
tblVehicleEF	MDV	1.8260e-003	1.6820e-003
tblVehicleEF	MDV	2.5170e-003	2.0250e-003
tblVehicleEF	MDV	1.6830e-003	1.5510e-003
tblVehicleEF	MDV	2.3150e-003	0.02
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.44
tblVehicleEF	MDV	4.7490e-003	4.0360e-003
tblVehicleEF	MDV	1.1360e-003	8.5800e-004
tblVehicleEF	MDV	0.10	0.48
tblVehicleEF	MDV	0.22	0.18
tblVehicleEF	MDV	0.08	0.45
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.27	0.48
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.07	1.31
tblVehicleEF	MH	6.43	2.11
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.89
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tblVehicleEF	MH	0.91	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0700e-004	1.8700e-004
tblVehicleEF	MH	1.47	0.11
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.51	0.04
tblVehicleEF	MH	0.14	0.09
tblVehicleEF	MH	0.03	1.50
tblVehicleEF	MH	0.40	0.11

tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.19	1.34
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tblVehicleEF	MH	59.49	18.64
tblVehicleEF	MH	1.41	1.37
tblVehicleEF	MH	0.86	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.11	0.07
tblVehicleEF	MH	0.03	1.49
tblVehicleEF	MH	0.34	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9700e-004	1.8400e-004
tblVehicleEF	MH	2.91	0.20
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	1.21	0.08
tblVehicleEF	MH	0.15	0.09
tblVehicleEF	MH	0.03	1.49

tblVehicleEF	MH	0.38	0.10
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	3.08	1.31
tblVehicleEF	MH	6.36	2.12
tblVehicleEF	MH	1,045.05	1,487.68
tblVehicleEF	MH	59.49	18.90
tblVehicleEF	MH	1.51	1.45
tblVehicleEF	MH	0.89	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.1740e-003	2.5200e-004
tblVehicleEF	MH	3.2230e-003	3.2760e-003
tblVehicleEF	MH	0.04	0.03
tblVehicleEF	MH	1.0790e-003	0.00
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.10	0.06
tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.37	0.10
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	7.0600e-004	1.8700e-004
tblVehicleEF	MH	1.75	0.12
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.53	0.04
tblVehicleEF	MH	0.15	0.09

tblVehicleEF	MH	0.03	1.58
tblVehicleEF	MH	0.40	0.11
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5160e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9450e-003
tblVehicleEF	MHD	0.32	3.17
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.32	0.34
tblVehicleEF	MHD	156.91	758.35
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89
tblVehicleEF	MHD	0.60	5.74
tblVehicleEF	MHD	0.99	1.61
tblVehicleEF	MHD	11.88	1.62
tblVehicleEF	MHD	3.8600e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.6900e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.02	0.16
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02

tblVehicleEF	MHD	1.5080e-003	7.1830e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1700e-004	2.9000e-005
tblVehicleEF	MHD	1.2800e-003	4.1290e-003
tblVehicleEF	MHD	0.04	6.7960e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	6.5100e-004	2.1860e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5800e-003	3.3450e-003
tblVehicleEF	MHD	0.05	2.8280e-003
tblVehicleEF	MHD	0.24	2.75
tblVehicleEF	MHD	0.28	0.33
tblVehicleEF	MHD	4.97	0.32
tblVehicleEF	MHD	166.20	765.37
tblVehicleEF	MHD	1,101.52	974.58
tblVehicleEF	MHD	52.43	2.86
tblVehicleEF	MHD	0.62	5.74
tblVehicleEF	MHD	0.92	1.52
tblVehicleEF	MHD	11.85	1.62
tblVehicleEF	MHD	3.2500e-004	0.01
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	3.1100e-004	0.01
tblVehicleEF	MHD	4.7830e-003	0.03

tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.02	0.15
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.06
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.30	0.01
tblVehicleEF	MHD	1.5950e-003	7.2500e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1100e-004	2.8000e-005
tblVehicleEF	MHD	2.5300e-003	7.5470e-003
tblVehicleEF	MHD	0.05	7.8460e-003
tblVehicleEF	MHD	0.03	0.20
tblVehicleEF	MHD	1.5010e-003	4.3550e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.33	0.02
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	3.5220e-003	3.3210e-003
tblVehicleEF	MHD	0.05	2.9240e-003
tblVehicleEF	MHD	0.45	3.76
tblVehicleEF	MHD	0.27	0.32
tblVehicleEF	MHD	5.23	0.34
tblVehicleEF	MHD	144.06	748.63
tblVehicleEF	MHD	1,101.52	974.57
tblVehicleEF	MHD	52.43	2.89

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tblVehicleEF	MHD	0.97	1.59
tblVehicleEF	MHD	11.87	1.62
tblVehicleEF	MHD	4.7000e-004	0.02
tblVehicleEF	MHD	5.0030e-003	0.04
tblVehicleEF	MHD	7.6400e-004	3.4000e-005
tblVehicleEF	MHD	4.4900e-004	0.02
tblVehicleEF	MHD	4.7830e-003	0.03
tblVehicleEF	MHD	7.0300e-004	3.2000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
tblVehicleEF	MHD	0.03	0.16
tblVehicleEF	MHD	6.4000e-004	2.2230e-003
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tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.32	0.02
tblVehicleEF	MHD	1.3860e-003	7.0900e-003
tblVehicleEF	MHD	0.01	9.2620e-003
tblVehicleEF	MHD	6.1600e-004	2.9000e-005
tblVehicleEF	MHD	1.3890e-003	4.2890e-003
tblVehicleEF	MHD	0.05	7.5870e-003
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tblVehicleEF	MHD	6.4000e-004	2.2230e-003
tblVehicleEF	MHD	0.04	0.07
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.35	0.02
tblVehicleEF	OBUS	0.01	0.12

tblVehicleEF	OBUS	9.9110e-003	6.5960e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	9.35
tblVehicleEF	OBUS	0.63	0.77
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tblVehicleEF	OBUS	70.35	1,526.75
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tblVehicleEF	OBUS	70.70	13.37
tblVehicleEF	OBUS	0.28	7.45
tblVehicleEF	OBUS	0.97	1.24
tblVehicleEF	OBUS	1.93	1.14
tblVehicleEF	OBUS	6.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	6.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.85
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.8400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1700e-004	1.3200e-004

tblVehicleEF	OBUS	2.1800e-003	0.03
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.09
tblVehicleEF	OBUS	9.3100e-004	0.01
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
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tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	0.01	6.7350e-003
tblVehicleEF	OBUS	0.03	0.01
tblVehicleEF	OBUS	0.26	9.12
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tblVehicleEF	OBUS	73.50	1,523.07
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tblVehicleEF	OBUS	1.88	1.13
tblVehicleEF	OBUS	5.4000e-005	0.01
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	5.1000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02

tblVehicleEF	OBUS	0.03	0.87
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.36	0.07
tblVehicleEF	OBUS	7.1400e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0800e-004	1.3000e-004
tblVehicleEF	OBUS	4.2350e-003	0.06
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.11
tblVehicleEF	OBUS	2.1330e-003	0.03
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	0.05	0.19
tblVehicleEF	OBUS	0.40	0.08
tblVehicleEF	OBUS	0.01	0.12
tblVehicleEF	OBUS	9.9380e-003	6.6000e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	9.66
tblVehicleEF	OBUS	0.63	0.77
tblVehicleEF	OBUS	6.22	1.60
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tblVehicleEF	OBUS	1,121.50	1,406.90
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tblVehicleEF	OBUS	0.27	7.69
tblVehicleEF	OBUS	0.96	1.22
tblVehicleEF	OBUS	1.91	1.14

tblVehicleEF	OBUS	7.7000e-005	0.02
tblVehicleEF	OBUS	4.6440e-003	0.01
tblVehicleEF	OBUS	9.2900e-004	1.4200e-004
tblVehicleEF	OBUS	7.4000e-005	0.01
tblVehicleEF	OBUS	4.4220e-003	0.01
tblVehicleEF	OBUS	8.5400e-004	1.3100e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
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tblVehicleEF	OBUS	0.04	0.83
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tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	0.05	0.20
tblVehicleEF	OBUS	0.38	0.08
tblVehicleEF	OBUS	6.4200e-004	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1600e-004	1.3200e-004
tblVehicleEF	OBUS	2.3200e-003	0.04
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	1.07
tblVehicleEF	OBUS	9.4100e-004	0.02
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tblVehicleEF	OBUS	0.05	0.20
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tblVehicleEF	SBUS	0.07	0.02
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tblVehicleEF	SBUS	15.02	0.83
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.04
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	2.9260e-003	0.02
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.68	3.38
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.11	0.11
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.27	0.11
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.6300e-004	1.4600e-004
tblVehicleEF	SBUS	2.9260e-003	0.02

tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	1.3050e-003	7.2690e-003
tblVehicleEF	SBUS	0.13	0.13
tblVehicleEF	SBUS	9.3510e-003	0.20
tblVehicleEF	SBUS	0.30	0.12
tblVehicleEF	SBUS	0.84	0.73
tblVehicleEF	SBUS	0.01	8.7140e-003
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tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	9.6490e-003	0.03
tblVehicleEF	SBUS	2.7560e-003	2.7010e-003
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.7500e-004	1.1200e-004
tblVehicleEF	SBUS	5.6170e-003	0.03

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tblVehicleEF	SBUS	0.11	0.11
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tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	4.3500e-004	1.3400e-004
tblVehicleEF	SBUS	5.6170e-003	0.03
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tblVehicleEF	SBUS	0.97	4.86
tblVehicleEF	SBUS	2.8800e-003	0.01
tblVehicleEF	SBUS	0.13	0.13
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	5.1700e-004	1.2200e-004
tblVehicleEF	SBUS	0.01	0.05
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tblVehicleEF	SBUS	0.03	0.03
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tblVehicleEF	SBUS	2.9580e-003	0.01
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tblVehicleEF	UBUS	13.57	0.12
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tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
tblVehicleEF	UBUS	1.2900e-003	1.1700e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
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tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
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tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.15	0.03
tblVehicleEF	UBUS	0.01	3.0250e-003
tblVehicleEF	UBUS	1.6240e-003	1.0500e-004
tblVehicleEF	UBUS	8.0860e-003	4.4150e-003
tblVehicleEF	UBUS	0.11	8.5970e-003
tblVehicleEF	UBUS	3.9450e-003	2.6580e-003
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tblVehicleEF	UBUS	1.25	0.04
tblVehicleEF	UBUS	1.83	4.45
tblVehicleEF	UBUS	0.08	8.3240e-003
tblVehicleEF	UBUS	9.36	34.75
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tblVehicleEF	UBUS	1,846.39	1,692.13
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tblVehicleEF	UBUS	5.45	0.38
tblVehicleEF	UBUS	13.45	0.12
tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
tblVehicleEF	UBUS	0.22	0.03
tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
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tblVehicleEF	UBUS	0.02	8.0540e-003
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tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
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tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.02	0.03
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tblVehicleEF	UBUS	0.02	8.0540e-003

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tblVehicleEF	UBUS	9.3320e-003	5.3510e-003
tblVehicleEF	UBUS	2.52	4.54
tblVehicleEF	UBUS	0.02	0.04
tblVehicleEF	UBUS	1.12	0.03
tblVehicleEF	UBUS	1.83	4.45
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tblVehicleEF	UBUS	13.86	0.81
tblVehicleEF	UBUS	1,846.39	1,692.13
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tblVehicleEF	UBUS	0.52	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.07	2.6550e-003
tblVehicleEF	UBUS	1.4030e-003	1.2700e-004
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tblVehicleEF	UBUS	3.0000e-003	6.6220e-003
tblVehicleEF	UBUS	0.06	2.5280e-003
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tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
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tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
tblVehicleEF	UBUS	0.61	0.07
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.13	0.03

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tblVehicleEF	UBUS	9.2250e-003	4.4400e-003
tblVehicleEF	UBUS	0.14	9.6260e-003
tblVehicleEF	UBUS	4.1190e-003	2.6850e-003
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tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	1.24	0.04
tblVehicleTrips	HS_TTP	19.20	19.00
tblVehicleTrips	HW_TTP	40.20	40.40
tblVehicleTrips	ST_TR	7.16	7.32
tblVehicleTrips	SU_TR	6.07	7.32
tblVehicleTrips	WD_TR	6.59	7.32

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.7529	3.8822	3.9177	7.2000e-003	0.2956	0.1985	0.4941	0.1198	0.1854	0.3052	0.0000	632.7438	632.7438	0.1386	0.0000	636.2079
2022	0.0755	0.2961	0.3664	6.7000e-004	0.0130	0.0147	0.0277	3.4800e-003	0.0137	0.0172	0.0000	58.5998	58.5998	0.0127	0.0000	58.9160
Maximum	**0.7529**	**3.8822**	**3.9177**	**7.2000e-003**	**0.2956**	**0.1985**	**0.4941**	**0.1198**	**0.1854**	**0.3052**	**0.0000**	**632.7438**	**632.7438**	**0.1386**	**0.0000**	**636.2079**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.7529	3.8822	3.9177	7.2000e-003	0.1862	0.1985	0.3847	0.0650	0.1854	0.2504	0.0000	632.7432	632.7432	0.1386	0.0000	636.2073
2022	0.0755	0.2961	0.3664	6.7000e-004	0.0124	0.0147	0.0271	3.3200e-003	0.0137	0.0171	0.0000	58.5997	58.5997	0.0127	0.0000	58.9159
Maximum	**0.7529**	**3.8822**	**3.9177**	**7.2000e-003**	**0.1862**	**0.1985**	**0.3847**	**0.0650**	**0.1854**	**0.2504**	**0.0000**	**632.7432**	**632.7432**	**0.1386**	**0.0000**	**636.2073**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**35.66**	**0.00**	**21.09**	**44.57**	**0.00**	**17.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-4-2021	4-3-2021	0.9958	0.9958
2	4-4-2021	7-3-2021	0.9267	0.9267
3	7-4-2021	10-3-2021	1.3600	1.3600
4	10-4-2021	1-3-2022	1.3557	1.3557
5	1-4-2022	4-3-2022	0.3319	0.3319
		Highest	1.3600	1.3600

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7120	0.0385	1.5276	1.8600e-003		0.1115	0.1115		0.1115	0.1115	11.8965	24.1919	36.0884	0.0368	8.1000e-004	37.2481
Energy	6.6300e-003	0.0567	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	154.5571	154.5571	6.3100e-003	2.2500e-003	155.3849
Mobile	0.4435	1.7771	3.5511	0.0101	0.7522	0.0102	0.7623	0.2013	0.0102	0.2115	0.0000	958.3802	958.3802	0.0597	0.0000	959.8733
Waste						0.0000	0.0000		0.0000	0.0000	10.4581	0.0000	10.4581	0.6181	0.0000	25.9095
Water						0.0000	0.0000		0.0000	0.0000	2.3151	33.8334	36.1484	0.2397	6.0100e-003	43.9327
Total	**1.1621**	**1.8722**	**5.1028**	**0.0123**	**0.7522**	**0.1262**	**0.8784**	**0.2013**	**0.1262**	**0.3275**	**24.6697**	**1,170.9625**	**1,195.6322**	**0.9606**	**9.0700e-003**	**1,222.3484**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3451	9.4100e-003	0.8156	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3308	1.3308	1.2800e-003	0.0000	1.3629
Energy	4.4800e-003	0.0383	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	124.7282	124.7282	5.4200e-003	1.7600e-003	125.3875
Mobile	0.4435	1.7771	3.5511	0.0101	0.7522	0.0102	0.7623	0.2013	0.0102	0.2115	0.0000	958.3802	958.3802	0.0597	0.0000	959.8733
Waste						0.0000	0.0000		0.0000	0.0000	10.4581	0.0000	10.4581	0.6181	0.0000	25.9095
Water						0.0000	0.0000		0.0000	0.0000	1.8521	28.7116	30.5637	0.1919	4.8300e-003	36.7991
Total	**0.7931**	**1.8247**	**4.3830**	**0.0104**	**0.7522**	**0.0178**	**0.7699**	**0.2013**	**0.0178**	**0.2191**	**12.3102**	**1,113.1508**	**1,125.4610**	**0.8763**	**6.5900e-003**	**1,149.3322**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**31.75**	**2.53**	**14.11**	**15.77**	**0.00**	**85.93**	**12.34**	**0.00**	**85.92**	**33.10**	**50.10**	**4.94**	**5.87**	**8.77**	**27.34**	**5.97**

3.0 Construction Detail

Construction Phase

Sierra Casa Grande - Palmetto - Replacement Site - San Bernardino-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	6/1/2021	1/28/2022	5	174	
6	Architectural Coating	Architectural Coating	6/1/2021	1/28/2022	5	174	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 226,800; Residential Outdoor: 75,600; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Sierra Casa Grande - Palmetto - Replacement Site - San Bernardino-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	115.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	81.00	12.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	16.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0900e-003	0.0000	7.0900e-003	1.0700e-003	0.0000	1.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**7.0900e-003**	**0.0155**	**0.0226**	**1.0700e-003**	**0.0144**	**0.0155**	**0.0000**	**34.0008**	**34.0008**	**9.5700e-003**	**0.0000**	**34.2400**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0134	2.1600e-003	4.0000e-005	9.9000e-004	4.0000e-005	1.0300e-003	2.7000e-004	4.0000e-005	3.1000e-004	0.0000	4.2571	4.2571	2.4000e-004	0.0000	4.2631
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**1.0400e-003**	**0.0140**	**7.5000e-003**	**6.0000e-005**	**2.6300e-003**	**5.0000e-005**	**2.6900e-003**	**7.1000e-004**	**5.0000e-005**	**7.6000e-004**	**0.0000**	**5.6219**	**5.6219**	**2.8000e-004**	**0.0000**	**5.6289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6300e-003	0.0000	2.6300e-003	4.0000e-004	0.0000	4.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	**0.0317**	**0.3144**	**0.2157**	**3.9000e-004**	**2.6300e-003**	**0.0155**	**0.0181**	**4.0000e-004**	**0.0144**	**0.0148**	**0.0000**	**34.0007**	**34.0007**	**9.5700e-003**	**0.0000**	**34.2400**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.5000e-004	0.0134	2.1600e-003	4.0000e-005	9.4000e-004	4.0000e-005	9.8000e-004	2.6000e-004	4.0000e-005	3.0000e-004	0.0000	4.2571	4.2571	2.4000e-004	0.0000	4.2631
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**1.0400e-003**	**0.0140**	**7.5000e-003**	**6.0000e-005**	**2.5000e-003**	**5.0000e-005**	**2.5500e-003**	**6.8000e-004**	**5.0000e-005**	**7.3000e-004**	**0.0000**	**5.6219**	**5.6219**	**2.8000e-004**	**0.0000**	**5.6289**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.1000e-004	3.2100e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8189	0.8189	2.0000e-005	0.0000	0.8195
Total	**4.1000e-004**	**3.1000e-004**	**3.2100e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8189**	**0.8189**	**2.0000e-005**	**0.0000**	**0.8195**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0335	0.0000	0.0335	0.0184	0.0000	0.0184	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0335**	**0.0102**	**0.0437**	**0.0184**	**9.4000e-003**	**0.0278**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.1000e-004	3.2100e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.8189	0.8189	2.0000e-005	0.0000	0.8195
Total	**4.1000e-004**	**3.1000e-004**	**3.2100e-003**	**1.0000e-005**	**9.4000e-004**	**1.0000e-005**	**9.4000e-004**	**2.5000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8189**	**0.8189**	**2.0000e-005**	**0.0000**	**0.8195**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2644
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0655**	**0.0116**	**0.0771**	**0.0337**	**0.0107**	**0.0443**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2644**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**6.9000e-004**	**5.2000e-004**	**5.3400e-003**	**2.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3649**	**1.3649**	**4.0000e-005**	**0.0000**	**1.3658**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0243	0.0000	0.0243	0.0125	0.0000	0.0125	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0229	0.2474	0.1586	3.0000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	26.0537	26.0537	8.4300e-003	0.0000	26.2643
Total	**0.0229**	**0.2474**	**0.1586**	**3.0000e-004**	**0.0243**	**0.0116**	**0.0359**	**0.0125**	**0.0107**	**0.0232**	**0.0000**	**26.0537**	**26.0537**	**8.4300e-003**	**0.0000**	**26.2643**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	**6.9000e-004**	**5.2000e-004**	**5.3400e-003**	**2.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3649**	**1.3649**	**4.0000e-005**	**0.0000**	**1.3658**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1996	1.8304	1.7404	2.8300e-003		0.1007	0.1007		0.0946	0.0946	0.0000	243.2191	243.2191	0.0587	0.0000	244.6861
Total	**0.1996**	**1.8304**	**1.7404**	**2.8300e-003**		**0.1007**	**0.1007**		**0.0946**	**0.0946**	**0.0000**	**243.2191**	**243.2191**	**0.0587**	**0.0000**	**244.6861**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.1226	0.0249	3.3000e-004	7.9400e-003	2.1000e-004	8.1500e-003	2.2900e-003	2.0000e-004	2.4900e-003	0.0000	31.9994	31.9994	2.1600e-003	0.0000	32.0533
Worker	0.0392	0.0296	0.3030	8.6000e-004	0.0933	6.1000e-004	0.0939	0.0248	5.6000e-004	0.0253	0.0000	77.3870	77.3870	2.1700e-003	0.0000	77.4412
Total	**0.0425**	**0.1522**	**0.3280**	**1.1900e-003**	**0.1012**	**8.2000e-004**	**0.1020**	**0.0271**	**7.6000e-004**	**0.0278**	**0.0000**	**109.3864**	**109.3864**	**4.3300e-003**	**0.0000**	**109.4945**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1996	1.8304	1.7404	2.8300e-003		0.1007	0.1007		0.0946	0.0946	0.0000	243.2189	243.2189	0.0587	0.0000	244.6858
Total	**0.1996**	**1.8304**	**1.7404**	**2.8300e-003**		**0.1007**	**0.1007**		**0.0946**	**0.0946**	**0.0000**	**243.2189**	**243.2189**	**0.0587**	**0.0000**	**244.6858**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3400e-003	0.1226	0.0249	3.3000e-004	7.6100e-003	2.1000e-004	7.8200e-003	2.2100e-003	2.0000e-004	2.4100e-003	0.0000	31.9994	31.9994	2.1600e-003	0.0000	32.0533
Worker	0.0392	0.0296	0.3030	8.6000e-004	0.0884	6.1000e-004	0.0890	0.0236	5.6000e-004	0.0241	0.0000	77.3870	77.3870	2.1700e-003	0.0000	77.4412
Total	**0.0425**	**0.1522**	**0.3280**	**1.1900e-003**	**0.0960**	**8.2000e-004**	**0.0968**	**0.0258**	**7.6000e-004**	**0.0266**	**0.0000**	**109.3864**	**109.3864**	**4.3300e-003**	**0.0000**	**109.4945**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1562	0.1636	2.7000e-004		8.0900e-003	8.0900e-003		7.6100e-003	7.6100e-003	0.0000	23.1725	23.1725	5.5500e-003	0.0000	23.3113
Total	**0.0171**	**0.1562**	**0.1636**	**2.7000e-004**		**8.0900e-003**	**8.0900e-003**		**7.6100e-003**	**7.6100e-003**	**0.0000**	**23.1725**	**23.1725**	**5.5500e-003**	**0.0000**	**23.3113**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	0.0111	2.2000e-003	3.0000e-005	7.6000e-004	2.0000e-005	7.7000e-004	2.2000e-004	2.0000e-005	2.3000e-004	0.0000	3.0227	3.0227	2.0000e-004	0.0000	3.0277
Worker	3.4900e-003	2.5300e-003	0.0265	8.0000e-005	8.8800e-003	6.0000e-005	8.9400e-003	2.3600e-003	5.0000e-005	2.4100e-003	0.0000	7.1046	7.1046	1.9000e-004	0.0000	7.1093
Total	**3.7900e-003**	**0.0136**	**0.0287**	**1.1000e-004**	**9.6400e-003**	**8.0000e-005**	**9.7100e-003**	**2.5800e-003**	**7.0000e-005**	**2.6400e-003**	**0.0000**	**10.1274**	**10.1274**	**3.9000e-004**	**0.0000**	**10.1369**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1562	0.1636	2.7000e-004		8.0900e-003	8.0900e-003		7.6100e-003	7.6100e-003	0.0000	23.1725	23.1725	5.5500e-003	0.0000	23.3113
Total	**0.0171**	**0.1562**	**0.1636**	**2.7000e-004**		**8.0900e-003**	**8.0900e-003**		**7.6100e-003**	**7.6100e-003**	**0.0000**	**23.1725**	**23.1725**	**5.5500e-003**	**0.0000**	**23.3113**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-004	0.0111	2.2000e-003	3.0000e-005	7.2000e-004	2.0000e-005	7.4000e-004	2.1000e-004	2.0000e-005	2.3000e-004	0.0000	3.0227	3.0227	2.0000e-004	0.0000	3.0277
Worker	3.4900e-003	2.5300e-003	0.0265	8.0000e-005	8.4200e-003	6.0000e-005	8.4800e-003	2.2500e-003	5.0000e-005	2.3000e-003	0.0000	7.1046	7.1046	1.9000e-004	0.0000	7.1093
Total	**3.7900e-003**	**0.0136**	**0.0287**	**1.1000e-004**	**9.1400e-003**	**8.0000e-005**	**9.2200e-003**	**2.4600e-003**	**7.0000e-005**	**2.5300e-003**	**0.0000**	**10.1274**	**10.1274**	**3.9000e-004**	**0.0000**	**10.1369**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0967	0.9948	1.1283	1.7600e-003		0.0522	0.0522		0.0480	0.0480	0.0000	154.1808	154.1808	0.0499	0.0000	155.4274
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0967**	**0.9948**	**1.1283**	**1.7600e-003**		**0.0522**	**0.0522**		**0.0480**	**0.0480**	**0.0000**	**154.1808**	**154.1808**	**0.0499**	**0.0000**	**155.4274**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3200e-003	4.0200e-003	0.0412	1.2000e-004	0.0127	8.0000e-005	0.0128	3.3600e-003	8.0000e-005	3.4400e-003	0.0000	10.5094	10.5094	2.9000e-004	0.0000	10.5167
Total	**5.3200e-003**	**4.0200e-003**	**0.0412**	**1.2000e-004**	**0.0127**	**8.0000e-005**	**0.0128**	**3.3600e-003**	**8.0000e-005**	**3.4400e-003**	**0.0000**	**10.5094**	**10.5094**	**2.9000e-004**	**0.0000**	**10.5167**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0967	0.9948	1.1283	1.7600e-003		0.0522	0.0522		0.0480	0.0480	0.0000	154.1806	154.1806	0.0499	0.0000	155.4272
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0967**	**0.9948**	**1.1283**	**1.7600e-003**		**0.0522**	**0.0522**		**0.0480**	**0.0480**	**0.0000**	**154.1806**	**154.1806**	**0.0499**	**0.0000**	**155.4272**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3200e-003	4.0200e-003	0.0412	1.2000e-004	0.0120	8.0000e-005	0.0121	3.2000e-003	8.0000e-005	3.2800e-003	0.0000	10.5094	10.5094	2.9000e-004	0.0000	10.5167
Total	**5.3200e-003**	**4.0200e-003**	**0.0412**	**1.2000e-004**	**0.0120**	**8.0000e-005**	**0.0121**	**3.2000e-003**	**8.0000e-005**	**3.2800e-003**	**0.0000**	**10.5094**	**10.5094**	**2.9000e-004**	**0.0000**	**10.5167**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.7000e-004	4.9000e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3157	1.3157	3.0000e-005	0.0000	1.3165
Total	**6.5000e-004**	**4.7000e-004**	**4.9000e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3157**	**1.3157**	**3.0000e-005**	**0.0000**	**1.3165**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.7000e-004	4.9000e-003	1.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3157	1.3157	3.0000e-005	0.0000	1.3165
Total	**6.5000e-004**	**4.7000e-004**	**4.9000e-003**	**1.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3157**	**1.3157**	**3.0000e-005**	**0.0000**	**1.3165**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1176	0.1400	2.3000e-004		7.2500e-003	7.2500e-003		7.2500e-003	7.2500e-003	0.0000	19.6601	19.6601	1.3500e-003	0.0000	19.6938
Total	**0.3270**	**0.1176**	**0.1400**	**2.3000e-004**		**7.2500e-003**	**7.2500e-003**		**7.2500e-003**	**7.2500e-003**	**0.0000**	**19.6601**	**19.6601**	**1.3500e-003**	**0.0000**	**19.6938**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6700e-003	4.2900e-003	0.0439	1.2000e-004	0.0135	9.0000e-005	0.0136	3.5900e-003	8.0000e-005	3.6700e-003	0.0000	11.2100	11.2100	3.1000e-004	0.0000	11.2178
Total	**5.6700e-003**	**4.2900e-003**	**0.0439**	**1.2000e-004**	**0.0135**	**9.0000e-005**	**0.0136**	**3.5900e-003**	**8.0000e-005**	**3.6700e-003**	**0.0000**	**11.2100**	**11.2100**	**3.1000e-004**	**0.0000**	**11.2178**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1176	0.1400	2.3000e-004		7.2500e-003	7.2500e-003		7.2500e-003	7.2500e-003	0.0000	19.6600	19.6600	1.3500e-003	0.0000	19.6938
Total	**0.3270**	**0.1176**	**0.1400**	**2.3000e-004**		**7.2500e-003**	**7.2500e-003**		**7.2500e-003**	**7.2500e-003**	**0.0000**	**19.6600**	**19.6600**	**1.3500e-003**	**0.0000**	**19.6938**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6700e-003	4.2900e-003	0.0439	1.2000e-004	0.0128	9.0000e-005	0.0129	3.4200e-003	8.0000e-005	3.5000e-003	0.0000	11.2100	11.2100	3.1000e-004	0.0000	11.2178
Total	**5.6700e-003**	**4.2900e-003**	**0.0439**	**1.2000e-004**	**0.0128**	**9.0000e-005**	**0.0129**	**3.4200e-003**	**8.0000e-005**	**3.5000e-003**	**0.0000**	**11.2100**	**11.2100**	**3.1000e-004**	**0.0000**	**11.2178**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0403					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0423**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.0000e-004	5.2300e-003	2.0000e-005	1.7500e-003	1.0000e-005	1.7700e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.4034	1.4034	4.0000e-005	0.0000	1.4043
Total	**6.9000e-004**	**5.0000e-004**	**5.2300e-003**	**2.0000e-005**	**1.7500e-003**	**1.0000e-005**	**1.7700e-003**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.4034**	**1.4034**	**4.0000e-005**	**0.0000**	**1.4043**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0403					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.0423**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	5.0000e-004	5.2300e-003	2.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4034	1.4034	4.0000e-005	0.0000	1.4043
Total	**6.9000e-004**	**5.0000e-004**	**5.2300e-003**	**2.0000e-005**	**1.6600e-003**	**1.0000e-005**	**1.6700e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.4034**	**1.4034**	**4.0000e-005**	**0.0000**	**1.4043**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4435	1.7771	3.5511	0.0101	0.7522	0.0102	0.7623	0.2013	0.0102	0.2115	0.0000	958.3802	958.3802	0.0597	0.0000	959.8733
Unmitigated	0.4435	1.7771	3.5511	0.0101	0.7522	0.0102	0.7623	0.2013	0.0102	0.2115	0.0000	958.3802	958.3802	0.0597	0.0000	959.8733

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	578.28	578.28	578.28	1,979,359	1,979,359
Total	578.28	578.28	578.28	1,979,359	1,979,359

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.40	19.00	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	80.3958	80.3958	4.5700e-003	9.5000e-004	80.7916
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	88.8990	88.8990	5.0500e-003	1.0400e-003	89.3367
NaturalGas Mitigated	4.4800e-003	0.0383	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	44.3324	44.3324	8.5000e-004	8.1000e-004	44.5958
NaturalGas Unmitigated	6.6300e-003	0.0567	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	65.6581	65.6581	1.2600e-003	1.2000e-003	66.0482

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.23039e+006	6.6300e-003	0.0567	0.0241	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	65.6581	65.6581	1.2600e-003	1.2000e-003	66.0482
Total		**6.6300e-003**	**0.0567**	**0.0241**	**3.6000e-004**		**4.5800e-003**	**4.5800e-003**		**4.5800e-003**	**4.5800e-003**	**0.0000**	**65.6581**	**65.6581**	**1.2600e-003**	**1.2000e-003**	**66.0482**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	830757	4.4800e-003	0.0383	0.0163	2.4000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	44.3324	44.3324	8.5000e-004	8.1000e-004	44.5958
Total		**4.4800e-003**	**0.0383**	**0.0163**	**2.4000e-004**		**3.0900e-003**	**3.0900e-003**		**3.0900e-003**	**3.0900e-003**	**0.0000**	**44.3324**	**44.3324**	**8.5000e-004**	**8.1000e-004**	**44.5958**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	383961	88.8990	5.0500e-003	1.0400e-003	89.3367
Total		**88.8990**	**5.0500e-003**	**1.0400e-003**	**89.3367**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	347235	80.3958	4.5700e-003	9.5000e-004	80.7916
Total		**80.3958**	**4.5700e-003**	**9.5000e-004**	**80.7916**

6.0 Area Detail

6.1 Mitigation Measures Area

Sierra Casa Grande - Palmetto - Replacement Site - San Bernardino-South Coast County, Annual

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3451	9.4100e-003	0.8156	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3308	1.3308	1.2800e-003	0.0000	1.3629
Unmitigated	0.7120	0.0385	1.5276	1.8600e-003		0.1115	0.1115		0.1115	0.1115	11.8965	24.1919	36.0884	0.0368	8.1000e-004	37.2481

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0350					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.3669	0.0291	0.7120	1.8200e-003		0.1069	0.1069		0.1069	0.1069	11.8965	22.8611	34.7576	0.0355	8.1000e-004	35.8852
Landscaping	0.0246	9.4100e-003	0.8156	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3308	1.3308	1.2800e-003	0.0000	1.3629
Total	**0.7120**	**0.0385**	**1.5276**	**1.8600e-003**		**0.1115**	**0.1115**		**0.1115**	**0.1115**	**11.8965**	**24.1919**	**36.0884**	**0.0368**	**8.1000e-004**	**37.2481**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0350					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0246	9.4100e-003	0.8156	4.0000e-005		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	1.3308	1.3308	1.2800e-003	0.0000	1.3629
Total	**0.3451**	**9.4100e-003**	**0.8156**	**4.0000e-005**		**4.5100e-003**	**4.5100e-003**		**4.5100e-003**	**4.5100e-003**	**0.0000**	**1.3308**	**1.3308**	**1.2800e-003**	**0.0000**	**1.3629**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Turf Reduction

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.5637	0.1919	4.8300e-003	36.7991
Unmitigated	36.1484	0.2397	6.0100e-003	43.9327

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	7.29725 / 4.60044	36.1484	0.2397	6.0100e-003	43.9327
Total		**36.1484**	**0.2397**	**6.0100e-003**	**43.9327**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.8378 / 4.31981	30.5637	0.1919	4.8300e-003	36.7991
Total		**30.5637**	**0.1919**	**4.8300e-003**	**36.7991**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.4581	0.6181	0.0000	25.9095
Unmitigated	10.4581	0.6181	0.0000	25.9095

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	51.52	10.4581	0.6181	0.0000	25.9095
Total		**10.4581**	**0.6181**	**0.0000**	**25.9095**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	51.52	10.4581	0.6181	0.0000	25.9095
Total		**10.4581**	**0.6181**	**0.0000**	**25.9095**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Health Risk Assessment
Sierra Avenue and Casa Grande Warehouse Project
City of Fontana, California

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APPENDIX
Appendix A: Modeling Data

LIST OF ABBREVIATED TERMS

A	absorption factor from inhalation
ACES	Advanced Collaborative Emissions Study
ASF	age sensitivity factor
AB	Assembly Bill
APN	Assessor's Parcel Number
APS	auxiliary power system
AT	averaging time
AQMP	Air Quality Management Plan
ATCM	Air Toxic Control Measure
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CLSP	California Landings Specific Plan
CSMA	California Subdivision Map Act
CPF	cancer potency factor
C_{air}	air concentration from model
C_i	air concentration of substance
DBR	daily breathing rate
DOORS	Diesel Off-Road Reporting System
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
Dose-air	does through inhalation
du/ac	dwelling units per acre
EMFAC	Emissions Factor Model
ED	exposure duration
EF	exposure frequency
°F	Fahrenheit
FCAA	Federal Clean Air Act
FAH	fraction of time spent at home
GSP	gross state product
GVWR	gross vehicle weight rating
HAP	hazardous air pollutant
HOA	homeowner's association
HQ	health quotient
HRA	health risk assessment
kg	kilograms
L	liter
MATES	Multiple Air Toxics Exposure Study
MICR	Maximum Individual Cancer Risk
mg	milligrams
$\mu g/m^3$	micrograms per cubic meter
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NED	National Elevation Dataset

LIST OF ABBREVIATED TERMS (CONTINUED)

NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone
OEHHA	Office Environmental Health Hazard Assessment
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PERP	Portable Equipment Registration Program
REL	Reference Exposure Level
REL_i	Reference Exposure Level of substance
$Risk_{inh\text{-}res}$	residential inhalation cancer risk
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
T-BACT	toxics best available control technology
TAC	Toxic Air Contaminant
EPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound

1 INTRODUCTION

The purpose of this Health Risk Assessment (HRA) is to evaluate potential health risks associated with Toxic Air Contaminants (TAC) including Diesel Particulate Matter (DPM) resulting from the implementation of the proposed Sierra Avenue and Casa Grande Warehouse Project ("Project" or "proposed Project"). This HRA was prepared in accordance with the requirements of the South Coast Air Quality Management District (SCAQMD) and guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur from the Project. Technical data is included as see Appendix A: Modeling Data.

1.1 Project Location and Setting

The proposed warehouse site is located in the northeastern portion of the City of Fontana (City); approximately 330 feet west of the City border as shown in Exhibit 1: *Regional Vicinity*. The warehouse site consists of three connected parcels on the northeast corner of the Sierra Avenue and Casa Grande Drive intersection; refer to Exhibit 2: *Local Vicinity.* Regional access would be available to the site via transportation routes including State Route 210 and Interstate Highway I-15. The State Route 210 entrance and exit is located approximately 1.5 miles south of the proposed Project via Sierra Avenue. The Interstate Highway I-15 entrance and exit is located approximately 1.6 miles north of the proposed Project via Sierra Avenue.

The warehouse site is a rectangular lot, mostly vacant, and unimproved site on approximately 16.5-gross acres (15.34-net acres) or approximately 661,561-square feet; refer to Exhibit 2**.** The northwest corner of the property is occupied by a single-family residence, while the remaining portion of the property is undeveloped land covered with natural vegetation, including two trees on the west side of the site. A concrete foundation from a former house remains on the site. Additionally, there is debris consisting of mostly rocks, dirt, tires, and an old domestic sprinkler hose. The property is zoned R-5 and R-MU for single-family residential and regional-mixed use commercial development by the City of Fontana, respectively.

1.2 Project Description

The proposed Project involves the development of a 317,820-square feet distribution warehouse building within the approximate 16.5-gross acre (15.34-net acre) warehouse site. The warehouse would have associated facilities and improvements such as a guard booth, mezzanine (5,000-square feet), vehicle parking, loading dock doors, trailer parking, onsite and off-site landscaping, and onsite and off-site improvements; Refer to Exhibit 3**:** *Conceptual Site Plan*.

Landscaping

Onsite landscaping would be provided on the Project site. Approximately forty-to-sixty-foot-wide landscaped buffers would be provided along the south and west boundaries and a twenty-foot-wide buffer along the northern boundary.

Project Circulation

Regional Project access would be from Interstate 215 (I-215) and State Route 210 (SR-210) via the officially designated local truck route[1] Sierra Avenue. Local access would be provided via Casa Grande Drive. Project site ingress and egress would be via four driveways; two approximately thirty-foot driveways on Sierra Avenue and two approximately forty-foot driveways on Casa Grande Drive.

Parking

The Project would provide 175 parking stalls, 45 trailers stalls, and 11 dock doors. In the future, it is anticipated for the Project to replace some parking stalls with trailer stalls. Thus, out of the 175 proposed parking stalls, 39 would be replaced by 24 trailer stalls. Ultimately, with the change in parking stalls, the Project is anticipated to provide 136 parking stalls and 69 trailer stalls.[2]

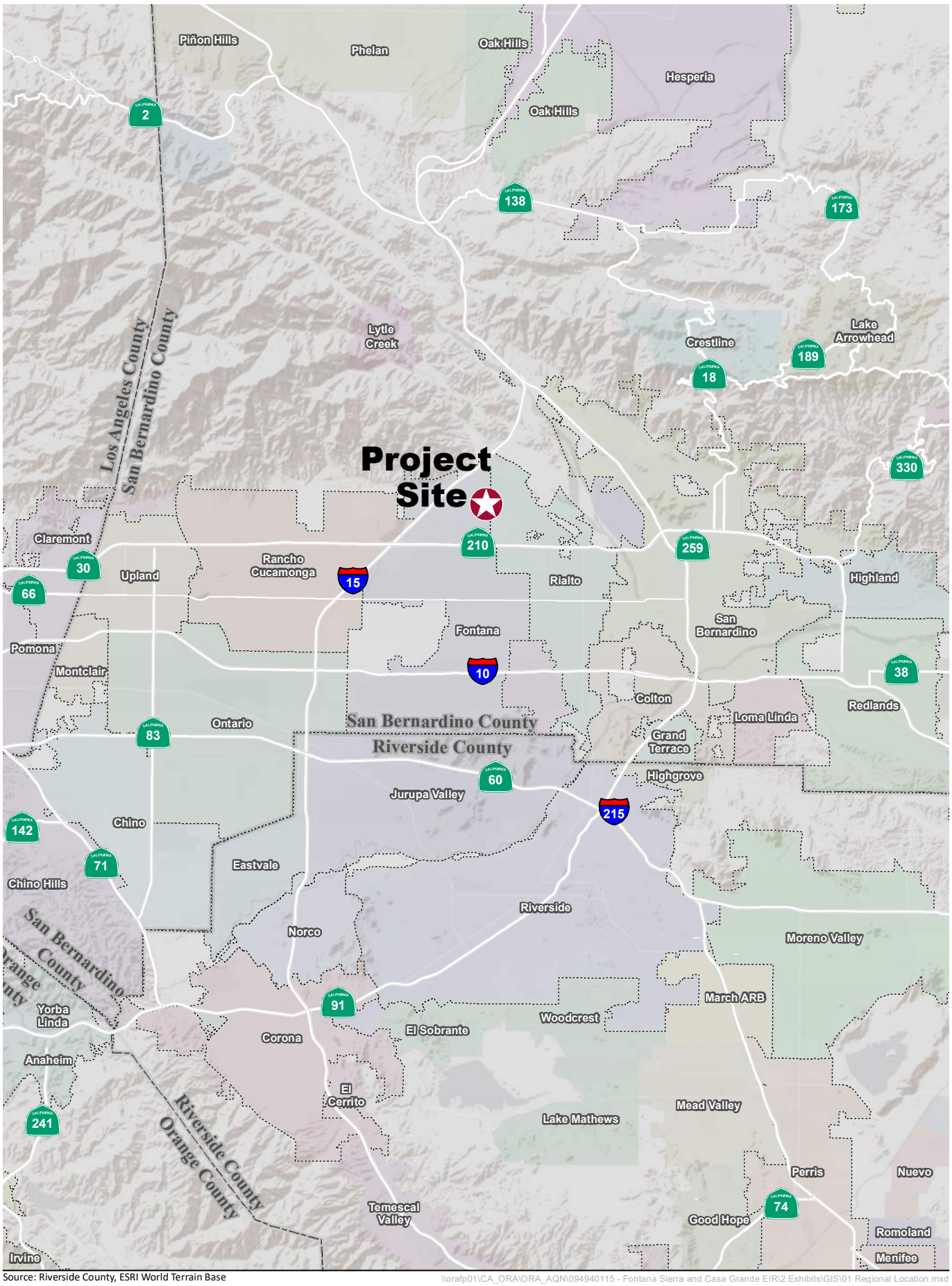
Project Phasing and Construction

The Project is anticipated to be developed in one phase. Should the Project be approved, construction is anticipated to occur over a duration of approximately 15 months, commencing in the first half of 2020; the facility would be operational in late 2021.

Offsite Improvements

The Project site will be responsible for approximately eighteen feet beyond the property line on Casa Grande Drive. Additionally, the Project would improve Sierra Avenue and Casa Grande Drive with approved curb, gutter, and lighting.

[1] City of Fontana, *Local Truck Routes*, https://www.fontana.org/DocumentCenter/View/3971/Local-Truck-Routes-2017-11x17?bidId=, accessed March 12, 2020.
[2] RGA, *Sierra Avenue/Casa Grande Drive Preliminary Site Plan – Scheme 02*, 2019.



Source: Riverside County, ESRI World Terrain Base

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\01 Regional Location.mxd

EXHIBIT 1: Regional Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 2.5 5

Miles

Kimley»Horn



Source: ESRI World Imagery

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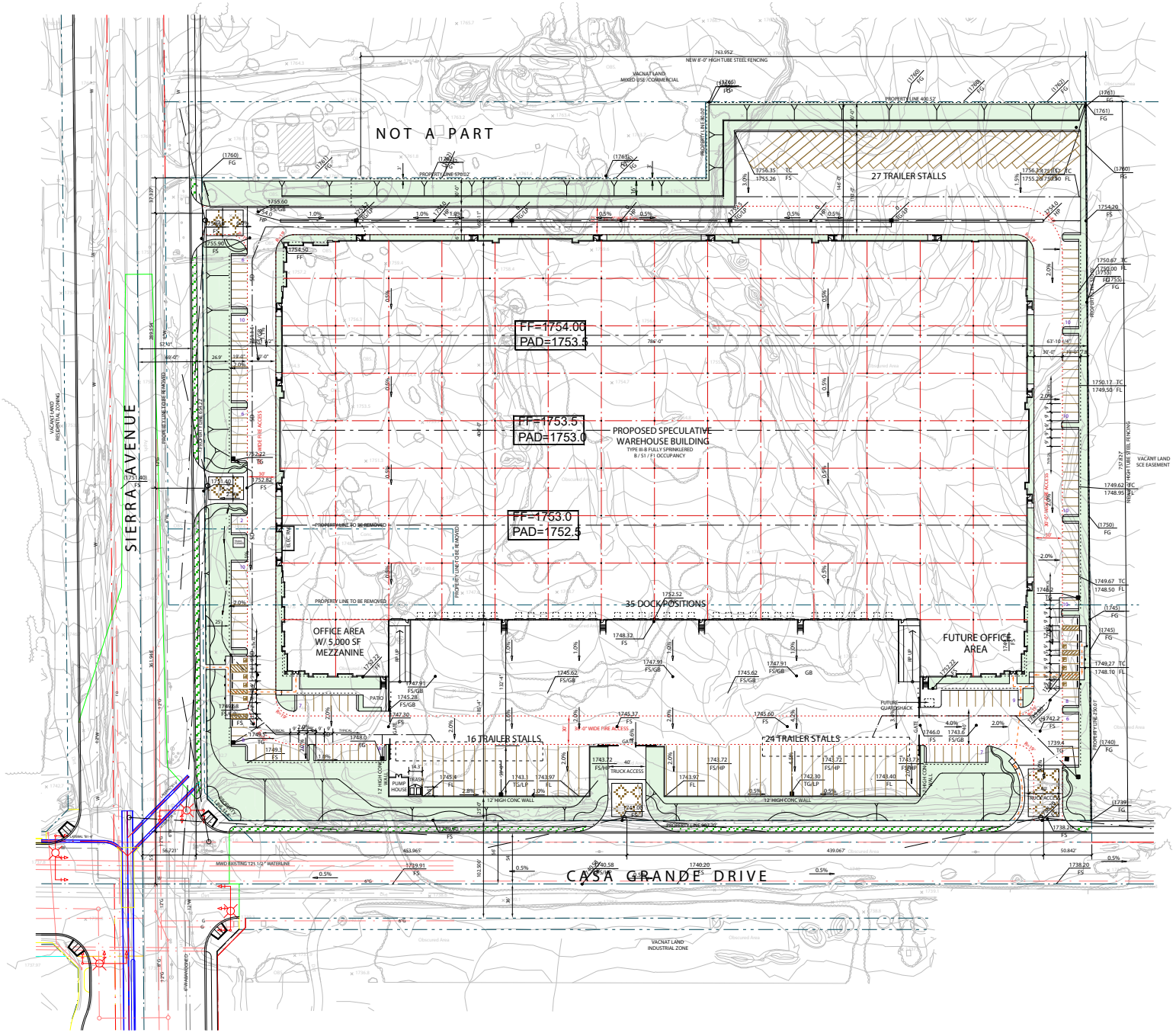
EXHIBIT 2: Site Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 250 500

Feet

Kimley»Horn



Source: RGA Office of Architectural Design

EXHIBIT 3: Conceptual Site Plan

Sierra Avenue and Casa Grande Warehouse Project

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Not to Scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 Climate

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the South Coast Air Basin (SCAB) is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the SCAB. These factors along with applicable regulations are discussed below.

The average annual temperature varies little throughout the SCAB, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the SCAB show greater variability in annual minimum and maximum temperatures. All portions of the SCAB have had recorded temperatures over 100°F in recent years.

2.2 Meteorology

Although the SCAB has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SCAB by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the SCAB. Precipitation in the SCAB is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the SCAB.

A temperature inversion is defined as an increase in temperature with height, or to the layer within which such an increase occurs. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire SCAB. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the SCAB. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The SCAB has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the Project is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded

with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

2.3 Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e. cancer causing) adverse human health effects (i.e. injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Hazardous Air Pollutants (HAP) is a term used by the Federal Clean Air Act (FCAA) that includes a variety of pollutants generated or emitted by industrial production activities. Identified as TACs under the California Clean Air Act (CCAA), ten have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. The California Air Resources Board (CARB) provides emission inventories for only the larger air basins.

TACs do not have ambient air quality standards because no safe levels of TACs can be determined. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) apply to facilities that use, produce, or emit toxic chemicals. Facilities subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Toxic contaminants often result from fugitive emissions during fuel storage and transfer activities, and from leaking valves and pipes. For example, the electronics industry, including semiconductor manufacturing, uses highly toxic chlorinated solvents in semiconductor production processes. Sources of air toxics go beyond industry, however. Automobile exhaust also contains toxic air pollutants such as benzene and 1,3-butadiene.

In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total DPM. It should be noted that CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan (DRRP), the Statewide Portable Equipment Registration Program (PERP), and the Diesel Off-Road Reporting System (DOORS). The PERP and DOORS programs allow owners or operators of portable engines and certain other types of equipment can register their units in order to operate their equipment throughout California without having to obtain individual permits from local air districts.

As stated above, diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated

by OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, CARB estimates that diesel particle levels measured in California's air in 2000 could cause 540 "excess" cancers in a population of 1 million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust similar to those developed by OEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen.

2.4 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project consist mostly of single-family residential communities. Sensitive land uses near the Project include the single-family residential communities 330 feet to the east and residences currently under construction, approximately 215 feet to the southwest.

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

The FCAA was amended in 1990 to address the numerous air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The FCAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the United States Environmental Protection Agency (EPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and DPM. More recently, the EPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the FCAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The FCAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

Federal Emissions Standards for On-Road Trucks

To reduce emissions from on-road, heavy-duty diesel trucks, the U.S. EPA established a series of increasingly strict emission standards for new engines, starting in 1988. The U.S. EPA promulgated the final and cleanest standards with the 2007 Heavy-Duty Highway Rule.[3] The PM emission standard of 0.01 gram per horsepower-hour (g/hp-hr) is required for new vehicles beginning with model year 2007. Also,

[3] United States Environmental Protection Agency (U.S. EPA), *Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*, Final Rule. 40 Code of Federal Regulations, Parts 69, 80, and 86. January 18, 2001.

the NO_X and nonmethane hydrocarbon (NMHC) standards of 0.20 g/hp-hr and 0.14 g/hp-hr, respectively, were phased in together between 2007 and 2010 on a percent of sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010.

Emission Standards for Off-Road Diesel Engines

To reduce emissions from off-road diesel equipment, the U.S. EPA established a series of cleaner emission standards for new off-road diesel engines. Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in from 2001 to 2006. Tier 3 standards were phased in from 2006 to 2008. Tier 4 standards, which generally require add-on emission control equipment to attain them, are being phased in from 2008 to 2015.

3.2 State of California

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.
CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the AB 2588 was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (DRRP) in October 2000. The DRRP's goals include an 85 percent reduction in DPM by 2020 from the 2000 baseline.[4] CARB estimates that emissions of DPM in 2035 will be less than half those in 2010, further reducing statewide cancer risk and non-cancer health effects.[5] The DRRP includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

[4] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

[5] California Air Resources Board, *Overview: Diesel Exhaust & Health*, available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health, accessed March 12, 2020.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_X) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks were required to be retrofitted with PM filters beginning January 1, 2012, and older trucks were required to be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses would need to have 2010 model year engines or equivalent.

The regulation applies to most privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks and there are several extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of the CARB ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to diesel particulate matter and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles. The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, beginning in 2008, would require that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

CalEnviroScreen

The California Office of Environmental Health Hazard Assessment (OEHHA) has developed CalEnviroScreen 3.0, which is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. CalEnviroScreen uses environmental, health, and socioeconomic information to produce scores for every census tract in the State. The scores are mapped so that different communities can be compared. An area with a high score is one that experiences a much higher pollution burden than areas with low scores.

According to CalEnviroScreen, the Project site is located within Census Tract 6071002704, which is within the 85-90 percentile. The residences that are located east of the Project site are within the 70-75 percentile in Census Tract 6071002703. It should be noted that the CalEnviroScreen scores are not an

expression of health risk, and do not provide quantitative information on increases in cumulative impacts for specific sites or projects. Further, as a comparative screening tool, the results do not provide a basis for determining when differences between scores are significant in relation to public health or the environment.

3.3 Regional

South Coast Air Quality Management District

The CCAA provides the SCAQMD with the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example of this would be the motor vehicles at an intersection, a mall, and on highways. As a State agency, CARB regulates motor vehicles and fuels for their emissions.

Air Toxics Control Plan

The Air Toxics Control Plan (March 2000, revised March 26, 2004) is a planning document designed to examine the overall direction of the SCAQMD's air toxics control program. It includes development and implementation of strategic initiatives to monitor and control air toxics emissions. Control strategies that are deemed viable and are within the SCAQMD's jurisdiction will each be brought to the SCAQMD Board for further consideration through the normal public review process. Strategies that are to be implemented by other agencies will be developed in a cooperative effort, and the progress will be reported back to the Board periodically.

Multiple Air Toxics Exposure Study

The SCAQMD conducted an in-depth analysis of the toxic air contaminants and their resulting health risks for all of Southern California. The Multiple Air Toxics Exposure Study in the SCAB (MATES IV) shows that cancer risk has decreased more than 50 percent between MATES III (2008) and MATES IV (2015).

MATES IV is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the SCAB emissions. Therefore, MATES IV study represents the baseline health risk for a cumulative analysis. MATES IV estimates the average excess cancer risk level from exposure to TACs is less than 400 in one million basin-wide. These model estimates were based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are near the Project site. However, MATES IV has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. MATES IV modeling predicted an excess cancer risk of 427 in one million for the Project area. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68 percent of the total risk shown in MATES IV. The SCAQMD is currently preparing MATES V, which will be the latest comprehensive study of levels of toxic air pollutants the region, MATES V will include an advanced monitoring component with a focus on refinery emissions.

Assembly Bill 617 – Community Air Protection Program

Passed by the California legislature in 2017, AB 617 is a law that focuses on reducing air pollution in environmental justice communities throughout the State. AB 617 requires a statewide strategy with focused actions for communities heavily impacted by air pollution. These actions include developing community air monitoring plans (CAMPs) and/or community emissions reduction plans (CERPs) to reduce emissions of toxic air contaminants (TACs) and criteria pollutants. The San Bernardino/Muscoy area was among three communities chosen for the program. The project site is approximately four miles west of the CERP's boundary and approximately three miles west of the emissions study area boundary.

The San Bernardino/Muscoy CERP outlines the actions and commitments to reduce air pollution for the San Bernardino/Muscoy community. Implementation of the CERP is estimated to reduce NO_X emissions by 40 to 50 tons per year and PM emissions by 0.5 to 0.6 tons per year. The CERP's goal is to cut NO_X and PM emissions 10 percent by 2024 and 21 percent and 15 percent, respectively, by 2029.

CERP implementation is to take place over approximately five years. Once adopted, the CERP would allow the SCAQMD to provide incentive funds to accelerate the replacement of old trucks with technology that is cleaner than required, focus enforcement to ensure rule compliance, develop new rules to reduce emissions, work with land use agencies to develop emissions reducing policies, and implement school programs to reduce indoor levels of pollution. The CERP does not includes project-specific requirements but would allow the SCAQMD and CARB to implement emissions reducing measures. Therefore, no further analysis is warranted.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Health Risk Analysis Thresholds

Project health risks are determined by examining the types and levels of air toxics generated and the associated impacts on factors that affect air quality. While the final determination of significance thresholds is within the purview of the lead agency pursuant to the State CEQA Guidelines, the SCAQMD recommends that the following air pollution thresholds be used by lead agencies in determining whether the impacts from the Project are significant. If the lead agency finds that the Project has the potential to exceed the air pollution thresholds, the Project should be considered significant. The thresholds for air toxic emissions are as follows:

- **Cancer Risk:** Emit contaminants that exceed the maximum individual cancer risk of 10 in one million.
- **Non-Cancer Risk:** Emit contaminants that exceed the maximum hazard quotient of 1 in one million.

Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to DPM exposure. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. The 10 in one million standard is a health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million which is 100 times more than the SCAQMD's threshold of 10 in one million.

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a "hazard index," (HI) expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index of less than 1.0 means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

4.2 Methodology

The air dispersion modeling for the HRA was performed using the EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data is provided by the SCAQMD. Surface and upper air meteorological data from the Fontana Monitoring Station was selected as being the most representative for meteorology based on proximity to the Project site.

The Project is located near existing residential uses. Due to the increased truck traffic from the Project, the resulting emissions could result in pollutant concentrations at existing sensitive receptors. Average daily trips from truck traffic attributed to the Project were obtained from the *Traffic Impact Study for the Proposed Sierra and Casa Grande Warehouse*, prepared by Kimley-Horn and Associates, Inc. (December 2019). An emission rate for PM_{10} (DPM) was calculated using trip data and a CARB 2017 EMission FACtor model (EMFAC)[6] model run for San Bernardino County; refer to Appendix A. The emissions rate was conservatively calculated using 2020 emissions factors. This approach is conservative as it assumes no cleaner technology in future years.

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known TAC. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. Operational activities would also include the use of e heavy-duty diesel trucks.

Construction Risk

Construction would generate DPM emissions from the use of off-road diesel equipment required for grading and excavation, paving, and other construction activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment were included in the analysis, although they are typically less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site potentially poses a health risk to nearby sensitive receptors. The closest sensitive receptors to the Project site are residences approximately 215 feet southwest of the site boundary. The nearest school to the Project site is a private music school located approximately 0.3 miles (1,580 feet) north of the site.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur throughout the Project site. Construction activities would limit idling to no more than five minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Furthermore, even during the most intense year of construction, emissions of DPM would be generated from different locations on the Project Site rather than in a single location because different types of construction activities (e.g., site preparation and building construction) would not occur at the same place at the same time.

The emission source in the model are line volume sources (comprised of smaller adjacent volume sources)[7] throughout the Project site. Heavy duty vehicle emissions were assigned a release height (i.e., average stack height) of 12 feet (3.7 meters), and a plume height of 20 feet (6.22 meters). Due to the location and spacing of the nearby sensitive receptors in the Project area, receptors were modeled with 50-meter grid spacing. In addition, National Elevation Dataset (NED) terrain data was imported into AERMOD for the Project area.

[6] California Air Resources Board, *EMFAC 2017 Web Database,* www.arb.ca.gov/emfac/2017/, accessed March 2020.

[7] Construction emissions would occur from heavy-duty equipment operating throughout the Project site. These sources were characterized as multiple volume sources (modeled as adjacent line volume sources that cover the disturbed areas of the project site) to represent construction equipment.

Maximum (worst case) PM_{10} exhaust construction emissions over the entire construction period were used in AERMOD to approximate construction DPM emissions. Risk levels were calculated according to the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015).

The health risk computation was conducted using the CARB Risk Assessment Standalone Tool (RAST). Project construction would occur for over a period of up to 15 months and the health risk computation was performed to determine the risk of developing an excess cancer risk calculated over this exposure period. The cancer risk calculations were based on applying age sensitivity weighting factors for each emissions period modeled. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case location of the proposed Project was assessed.

Operational Risk

The operational emission sources in the model are line volume sources (comprised of smaller adjacent volume sources) for the loading dock idling areas, on-site truck circulation, and off-site truck routes. Heavy duty vehicle emissions were assigned a release height of 12 feet (3.66 meters) and a plume height of 20.4 feet (6.22 meters). A release height of 12 feet is the average stack height for trucks and the plume height is based on EPA guidance for vehicle volume sources.

AERMOD was run to obtain the peak 1-hour and annual average concentration in micrograms per cubic meter ($\mu g/m^3$) of PM_{10} at the nearby sensitive receptors. According to the SCAQMD's Supplemental Guidelines for Preparing Risk Assessments for AB 2588, air dispersion modeling is required to estimate annual average concentrations to calculate the Maximum Individual Cancer Risk (MICR), the maximum chronic HI, the zones of impact, and excess cancer burden, as well as peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, a receptor grid was placed over the Project site to cover the zone of impact. According to the SCAQMD, in order "to identify the maximum impacted receptors (i.e. peak cancer risk and peak hazard indices) a grid spacing of 100 meters or less must be used" (see page 16 of SCAQMD's Supplemental Guidelines). Due to the size of the Project site, receptors were modeled with a 50-meter grid spacing. In addition, National Elevation Dataset (NED) terrain data was imported into AERMOD for the Project. The modeling and analysis was prepared in accordance with the SCAQMD Modeling Guidance for AERMOD.[8]

Note that the concentration estimate developed using this methodology is conservative and is not a specific prediction of the actual concentrations that would occur at the Project site any one point in time. Actual 1-hour and annual average concentrations are dependent on many variables, particularly the number and type of vehicles and equipment operating at specific distances during time periods of adverse meteorology. A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on these worst-case exposure duration scenarios. The chronic and carcinogenic

[8] South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance, accessed March 12, 2020.

health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case location of the Project was assessed.

Risk and Hazard Assessment

Cancer Risk

Based on the OEHHA methodology, residential inhalation cancer risk from annual average DPM and benzene concentrations are calculated by multiplying the daily inhalation dose, cancer potency factor, age sensitivity factor (ASF), frequency of time spent at home, and exposure duration divided by averaging time, yielding the excess cancer risk. These factors are discussed in more detail below. It is important to note that exposure duration is based on continual heavy truck operation along nearby roadways. Exposure through inhalation (Dose-air) is a function of breathing rate, exposure frequency, and concentration of substance in the air. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\text{Dose-air} = C_{air} * (BR/BW) * A * EF * 10^{-6}$$

Dose-air =	dose through inhalation (mg/kg/day)
C_{air} =	air concentration ($\mu g/m^3$) from air dispersion model
(DBR/BW) =	daily breathing rate normalized to body weight (L/kg bodyweight-day)
A =	inhalation absorption factor (unitless)
EF =	exposure frequency (approximately 350 days per year for residential)
10^{-6} =	conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to consider the increased sensitivity to carcinogens during early-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF presented in Table 1: Default Age Sensitivity Factors and Fraction of Time at Home. Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the FAH values presented in Table 1.

Table 1: Default Age Sensitivity Factors and Fraction of Time at Home

Age	Default Age Sensitivity Factor[1] (ASF)	Fraction of Time at Home (FAH)
Third trimester to age 2 years	10	85%
Ages 2 through 15 years	3	72%
Ages 16 and greater	1	73%

[1] Accounts for potential increased sensitivity to carcinogens during childhood.
Source: California Office of Environmental Health Hazard Assessment, *Air Toxics Program Guidance Manual for the Preparation of Health Risk Assessments*, February 2015.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$Risk_{inh\text{-}res} = (Dose_{air}*CPF*ASF*(ED/AT)*FAH)$$

$Risk_{inh\text{-}res}$ =	residential inhalation cancer risk (potential chances per million)
$Dose_{air}$ =	daily dose through inhalation (mg/kg-day)
CPF =	inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF =	age sensitivity factor for a specified age group (unitless)
ED =	exposure duration (years)
AT =	averaging time of lifetime cancer risk (years)
FAH =	fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

$$\text{Hazard Quotient} = C_i/REL_i$$

C_i =	concentration in the air of substance i (annual average concentration in $\mu g/m^3$)
REL_i =	chronic noncancer Reference Exposure Level for substance ($\mu g/m^3$)

Acute Non-Cancer Hazard

The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts. The equation is as follows:

Acute HQ = Maximum Hourly Air Concentration ($\mu g/m^3$) / Acute REL ($\mu g/m^3$)

5 POTENTIAL HEALTH RISK IMPACTS

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel exhaust is composed of two phases, either gas or particulate – both contribute to the risk. The gas phase is composed of many of the urban TACs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines. As the Project is proposed near existing residences, an analysis of DPM was performed using the EPA-approved AERMOD model.

5.1 Construction Health Risk Analysis

The duration of construction activities for the Project is estimated to take approximately 15 months. Construction-related activities would result in Project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, diesel PM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. Sensitive receptors near the Project site include residential uses approximately 330 feet to the east and 215 feet to the southwest.

PM_{10} construction emissions rates in grams per second were calculated from the total annual mitigated on-site exhaust emissions reported in CalEEMod (a maximum of 0.08 tons per year mitigated) total during construction. It should be noted that although construction would span over several years, the modeling conservatively uses the year with the highest emission for each phase. Annual emissions were converted to grams per second and these emissions rates were input into AERMOD.

As noted above, maximum (worst case) PM_{10} exhaust construction emissions over the entire construction period were used in AERMOD to approximate construction DPM emissions. Risk levels were calculated based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, Air Toxics Hot Spots Program Risk Assessment Guidelines (February 2015). Results of this assessment are summarized in Table 2: Construction Risk.

Table 2: Construction Risk

Exposure Scenario	Pollutant Concentration (µg/m³)	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Unmitigated Construction				
Construction	0.089	15.7	0.018	0.181
Threshold	*N/A*	*10 in one million*	*1.0*	*1.0*
Threshold Exceeded	**No**	**Yes**	**No**	**No**
Mitigated Construction (Tier 4)				
Mitigated Construction[1]	0.056	8.89	0.010	0.112
Threshold	*N/A*	*10 in one million*	*1.0*	*1.0*
Threshold Exceeded	**No**	**No**	**No**	**No**

1. Heavy-duty off-road construction equipment would be required to meet CARB Tier 4 Final emissions standards per Mitigation Measure HRA-1.

Refer to Appendix A.

Results of this assessment indicate that the unmitigated maximum concentration of PM_{10} during construction would be 0.089 µg/m^3 and resultant cancer risk of 15.7 in one million, which would exceed the SCAQMD threshold of 10 in one million. Non-cancer hazards for diesel PM would be below SCAQMD threshold of 1.0, with a chronic hazard index computed at 0.018 and an acute hazard index of 0.181. To In order to reduce the diesel PM cancer risk during construction activities, the Project shall comply with Mitigation Measure HRA-1 requiring construction equipment to meet CARB Tier 4 Final emissions standards. With implementation of Mitigation Measure HRA-1, the maximum concentration of PM_{10} during construction would be reduced to 0.056 µg/m^3. Maximum cancer risk from Project construction would decrease to 8.89 per million. Additionally, acute and chronic hazards would be lowered to 0.010 and 0.112 respectively. Therefore, with mitigation construction risk levels would be less than SCAQMD thresholds.

5.2 Operational Health Risk Analysis

Carcinogenic Risk

Vehicle DPM emissions were estimated using emission factors for course particulate matter less than 10 microns in diameter (PM_{10}) generated with the EMFAC developed by CARB. EMFAC is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. EMFAC, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC for vehicles in the SCAQMD within the South Coast portion of San Bernardino County. EMFAC generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed, temperature, and relative humidity. The model was run for heavy-duty

diesel vehicles traveling along Sierra Avenue and Casa Grande Avenue, as well as circulating the Project site and idling at proposed loading docks.

Based on the AERMOD outputs, the highest expected hourly average diesel PM_{10} emission concentrations from diesel truck traffic near sensitive receptors would be 0.0144 µg/m^3. The highest expected annual average diesel PM_{10} emission concentrations near sensitive receptors would be 0.0038 µg/m^3. The calculations conservatively assume no cleaner technology with lower emissions in future years. As shown in Table 3: Operational Risk, the highest calculated carcinogenic risk resulting from the Project is 2.58 per million residents.

Table 3: Operational Risk

Exposure Scenario	Maximum Cancer Risk (Risk per Million)[1, 2]	Significance Threshold (Risk per Million)	Exceeds Significance Threshold?
Residents	2.58	10	No

[1] Refer to Appendix A.

[2] The maximum cancer risk would be experienced at the residential uses located at the northwest corner of the Sierra Avenue and Sierra Lakes Parkway intersection based on worst-case exposure durations for the Project, 95th percentile breathing rates, and 30-year averaging time.

It should be noted that carcinogenic risks are calculated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to a potential carcinogen and are calculated using conservative modeling approaches that overestimate risk at the low exposure range predicted by the model. The oral and inhalation cancer slope factors are used to calculate the theoretical increased risk of an individual developing cancer based on the estimated daily exposure or dose, averaged over a lifetime. Table 3 shows that impacts related to cancer risk would be less than significant at nearby residential communities. Therefore, the Project would not adversely impact neighboring disadvantaged communities (as defined by CalEnviroScreen).

Non-Carcinogenic Hazards

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index associated with both DPM and acrolein emissions from the Project would be 0.0007 and 0.0055, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur.

5.3 Conclusion

As described above, impacts related to cancer risk would be less than significant with implementation of Mitigation Measure HRA-1. Additionally, non-carcinogenic hazards are calculated to be within acceptable limits. It should be noted that the impacts assess the Project's incremental contribution to health risk impacts, consistent with the SCAQMD guidance and methodology. The SCAQMD has not established separate cumulative thresholds and does not require combining impacts from cumulative projects. The SCAQMD considers projects that do not exceed the project-specific thresholds to generally not be cumulatively significant.[9] Therefore, impacts related to health risk from the Project would be less than significant.

Mitigation Measures:

HRA-1 **Off-Road Diesel-Powered Construction Equipment.** Prior to issuance of grading permits, the applicant shall prepare and submit documentation to the City of Fontana that demonstrate that all off-road diesel-powered construction equipment greater than 50 horsepower meets California Air Resources Board Tier 4 Final off-road emissions standards.

Level of Significance: Less than significant impact with mitigation incorporated.

[9] South Coast Air Quality Management District, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, August 2003.

6 REFERENCES

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Appendix A

Modeling Data

Truck Route Emissions	Speed (mph)	Trips (veh/day)	Emissions Factor (g/mi)	Length (meters)	Length (mi/veh)	Emissions (g/day)	Emission Rate (g/sec)	Directional Rate (g/sec)
Sierra Avenue - I-15 to Casa Grande	55	12	6.82E-02	2613.4	1.62	1.31E+00	1.51E-05	7.57E-06
Sierra Avenue - SR-210 to Casa Grande	55	106	6.82E-02	2355.2	1.46	1.06E+01	1.23E-04	6.14E-05
Casa Grande - to W Driveway	15	118	8.29E-02	97	0.06	5.89E-01	6.82E-06	3.41E-06
Casa Grande - W Driveway to E Driveway	15	59	8.29E-02	195.6	0.12	5.94E-01	6.88E-06	3.44E-06
W Driveway Site Entrance	5	59	6.32E-02	48.1	0.03	1.11E-01	1.29E-06	6.44E-07
E Driveway Site Entrance	5	59	6.32E-02	81	0.05	1.88E-01	2.17E-06	1.09E-06
On-Site Idling	0	118	5.66E-02	166.5	0.10	6.91E-01	8.00E-06	4.00E-06

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SAN BERNARDINO
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	VMT	ROG_RUNEX	TOG_RUNEX	CO_RUNEX	NOx_RUNEX	CO2_RUNEX	CH4_RUNEX	PM10_RUNEX	PM2_5_RUNEX	N2O_RUNEX
SAN BERNARDINO	2020	HHDT	Aggregated	5	DSL	9516.682267	0.011165606	0.012711192	0.040251805	0.192075669	45.38775018	0.000518613	0.00059756	0.000571709	0.007134322
SAN BERNARDINO	2020	HHDT	Aggregated	10	DSL	28410.70767	0.027258555	0.03103179	0.083851078	0.453399147	111.2491267	0.001266089	0.002493121	0.00238527	0.017486813
SAN BERNARDINO	2020	HHDT	Aggregated	15	DSL	34127.13938	0.021087588	0.024006614	0.067290916	0.372068856	99.08917515	0.000979464	0.002415183	0.002310703	0.015575438
SAN BERNARDINO	2020	HHDT	Aggregated	25	DSL	90822.97904	0.021657494	0.024655409	0.085859189	0.622391998	186.3797117	0.001005935	0.004928899	0.004715677	0.029296295
SAN BERNARDINO	2020	HHDT	Aggregated	35	DSL	168882.6801	0.024600032	0.028005264	0.10214629	0.840050341	282.3700474	0.001142608	0.008296906	0.007937985	0.044384639
SAN BERNARDINO	2020	HHDT	Aggregated	55	DSL	265941.5546	0.022263619	0.025345436	0.090368914	0.942071754	371.5058807	0.001034087	0.017839734	0.017067995	0.058395551
SAN BERNARDINO	2020	LDA	Aggregated	5	DSL	144.1535757	3.45667E-05	3.93519E-05	0.00054248	2.9599E-05	0.084705718	1.60556E-06	5.09909E-06	4.8785E-06	1.33146E-05
SAN BERNARDINO	2020	LDA	Aggregated	10	DSL	1043.038879	0.000182737	0.000208034	0.002911874	0.000184383	0.508145394	8.48779E-06	2.59544E-05	2.48317E-05	7.98734E-05
SAN BERNARDINO	2020	LDA	Aggregated	15	DSL	2557.269616	0.00023475	0.000267247	0.003575673	0.000357572	1.026440207	1.09037E-05	5.03492E-05	4.81711E-05	0.000161342
SAN BERNARDINO	2020	LDA	Aggregated	25	DSL	17680.69463	0.000505201	0.000575137	0.006511427	0.001890936	4.891064708	2.34656E-05	0.000232974	0.000222896	0.000768807
SAN BERNARDINO	2020	LDA	Aggregated	35	DSL	34005.6397	0.000642866	0.00073186	0.008027894	0.0035488	7.379133617	2.98599E-05	0.000346091	0.000331119	0.001159897
SAN BERNARDINO	2020	LDA	Aggregated	55	DSL	20704.24073	0.000285445	0.00032496	0.003408876	0.002368058	4.273859633	1.32584E-05	0.000186542	0.000178473	0.000671791
SAN BERNARDINO	2020	LDT1	Aggregated	5	DSL	0.558592869	6.21198E-07	7.07192E-07	2.71165E-06	5.86673E-07	0.000651004	2.88534E-08	4.66568E-07	4.46384E-07	1.02329E-07
SAN BERNARDINO	2020	LDT1	Aggregated	10	DSL	4.251326563	3.24561E-06	3.69491E-06	1.46489E-05	4.70308E-06	0.004195717	1.50752E-07	2.41591E-06	2.3114E-06	6.59508E-07
SAN BERNARDINO	2020	LDT1	Aggregated	15	DSL	10.24306475	5.65873E-06	6.44209E-06	2.58537E-05	1.17911E-05	0.008365112	2.62837E-07	4.27595E-06	4.09098E-06	1.31488E-06
SAN BERNARDINO	2020	LDT1	Aggregated	25	DSL	69.13601976	2.30419E-05	2.62317E-05	0.000111059	8.68788E-05	0.038782386	1.07025E-06	1.77554E-05	1.69873E-05	6.09605E-06
SAN BERNARDINO	2020	LDT1	Aggregated	35	DSL	130.4139321	3.18394E-05	3.62471E-05	0.00016786	0.000178724	0.056959368	1.47888E-06	2.46531E-05	2.35866E-05	8.95322E-06
SAN BERNARDINO	2020	LDT1	Aggregated	55	DSL	76.6446191	1.7297E-05	1.96915E-05	0.000117972	0.000123084	0.031409027	8.03413E-07	1.35024E-05	1.29183E-05	4.93706E-06
SAN BERNARDINO	2020	LDT2	Aggregated	5	DSL	28.33621119	8.11266E-06	9.23572E-06	6.55211E-05	5.04013E-06	0.022316915	3.76817E-07	6.146E-07	5.88012E-07	3.50791E-06
SAN BERNARDINO	2020	LDT2	Aggregated	10	DSL	204.965618	4.35957E-05	4.96308E-05	0.00035248	3.11351E-05	0.135568586	2.02494E-06	3.43227E-06	3.28379E-06	2.13095E-05
SAN BERNARDINO	2020	LDT2	Aggregated	15	DSL	502.5793775	5.3766E-05	6.12091E-05	0.000429255	5.51568E-05	0.275852277	2.49733E-06	6.73595E-06	6.44455E-06	4.33601E-05
SAN BERNARDINO	2020	LDT2	Aggregated	25	DSL	3475.296327	9.90434E-05	0.000112754	0.000749273	0.000238338	1.31544495	4.60038E-06	3.14929E-05	3.01305E-05	0.00020677
SAN BERNARDINO	2020	LDT2	Aggregated	35	DSL	6684.890424	0.000119708	0.000136279	0.000901165	0.000393891	1.976472239	5.56019E-06	4.68578E-05	4.48308E-05	0.000310674
SAN BERNARDINO	2020	LDT2	Aggregated	55	DSL	4070.920971	4.55994E-05	5.19119E-05	0.000346856	0.00022141	1.136101022	2.11801E-06	2.37492E-05	2.27218E-05	0.000178579
SAN BERNARDINO	2020	LHDT1	Aggregated	5	DSL	145.6466361	0.000121898	0.000138773	0.000488291	0.000369983	0.200946366	5.66192E-06	1.34986E-05	1.29147E-05	3.1586E-05
SAN BERNARDINO	2020	LHDT1	Aggregated	10	DSL	2307.844317	0.001397157	0.00159057	0.005624115	0.005878305	2.673651375	6.48953E-05	0.000153755	0.000147104	0.000420261
SAN BERNARDINO	2020	LHDT1	Aggregated	15	DSL	5836.648459	0.002082144	0.002370382	0.008660962	0.015002371	4.417025264	9.67116E-05	0.000294504	0.000281764	0.000694295
SAN BERNARDINO	2020	LHDT1	Aggregated	25	DSL	23931.8717	0.003685498	0.004195694	0.016927754	0.065902996	13.70245818	0.000171184	0.000774014	0.00074053	0.002153836
SAN BERNARDINO	2020	LHDT1	Aggregated	35	DSL	35618.8995	0.003822929	0.004352151	0.019200242	0.106226662	18.52200697	0.000177568	0.00086124	0.000823983	0.002911402
SAN BERNARDINO	2020	LHDT1	Aggregated	55	DSL	43827.4244	0.00400894	0.004563912	0.026420131	0.157301876	23.72871394	0.000186208	0.000946525	0.000905579	0.003729823
SAN BERNARDINO	2020	LHDT2	Aggregated	5	DSL	54.23231956	4.49056E-05	5.11221E-05	0.000182093	0.000118591	0.078946618	2.08578E-06	4.47182E-06	4.27837E-06	1.24093E-05
SAN BERNARDINO	2020	LHDT2	Aggregated	10	DSL	860.359825	0.000518796	0.000590615	0.00211067	0.00187095	1.11192464	2.40971E-05	5.22572E-05	4.99966E-05	0.000174779
SAN BERNARDINO	2020	LHDT2	Aggregated	15	DSL	2175.378327	0.000748009	0.000851558	0.00312561	0.004687795	1.871881512	3.47436E-05	0.000101202	9.68245E-05	0.000294234
SAN BERNARDINO	2020	LHDT2	Aggregated	25	DSL	8912.000208	0.001223046	0.001392357	0.005596198	0.020142377	5.833239717	5.68082E-05	0.000268417	0.000256806	0.000916904
SAN BERNARDINO	2020	LHDT2	Aggregated	35	DSL	13262.61724	0.001251513	0.001424765	0.006228784	0.032268547	7.829555103	5.81304E-05	0.000300785	0.000287774	0.001230697
SAN BERNARDINO	2020	LHDT2	Aggregated	55	DSL	16289.15266	0.00126302	0.001437864	0.00821136	0.047217937	9.572946026	5.86649E-05	0.00032189	0.000307965	0.001504734
SAN BERNARDINO	2020	MDV	Aggregated	5	DSL	87.18849425	2.01524E-05	2.29421E-05	0.00034343	1.68096E-05	0.087193878	9.36038E-07	1.95246E-06	1.868E-06	1.37057E-05
SAN BERNARDINO	2020	MDV	Aggregated	10	DSL	626.9105046	0.000106615	0.000121374	0.001832228	0.000102592	0.529831608	4.95207E-06	1.03125E-05	9.86637E-06	8.32822E-05
SAN BERNARDINO	2020	MDV	Aggregated	15	DSL	1540.423393	0.000132933	0.000151335	0.002234098	0.000191545	1.105993145	6.17448E-06	2.07751E-05	1.98763E-05	0.000173847
SAN BERNARDINO	2020	MDV	Aggregated	25	DSL	10682.06735	0.000254712	0.000289973	0.003901564	0.000938629	5.398560102	1.18309E-05	9.99043E-05	9.55825E-05	0.000848578
SAN BERNARDINO	2020	MDV	Aggregated	35	DSL	20593.24489	0.000314737	0.000358307	0.004721257	0.001698233	8.170973528	1.46189E-05	0.000151381	0.000144832	0.001284363
SAN BERNARDINO	2020	MDV	Aggregated	55	DSL	12590.13362	0.000127897	0.000145602	0.001856672	0.001094613	4.784611082	5.94058E-06	7.9089E-05	7.56676E-05	0.000752074
SAN BERNARDINO	2020	MH	Aggregated	5	DSL	4.816990893	5.55764E-06	6.327E-06	1.24154E-05	7.90328E-05	0.011132769	2.58142E-07	1.67666E-06	1.60413E-06	1.74992E-06
SAN BERNARDINO	2020	MH	Aggregated	10	DSL	91.56341557	7.83753E-05	8.9225E-05	0.000186412	0.001241254	0.192049211	3.64038E-06	2.63357E-05	2.51964E-05	3.01875E-05
SAN BERNARDINO	2020	MH	Aggregated	15	DSL	171.0724935	7.42787E-05	8.45613E-05	0.000212094	0.001612525	0.294655691	3.4501E-06	3.59921E-05	3.44351E-05	4.63158E-05
SAN BERNARDINO	2020	MH	Aggregated	25	DSL	673.1906031	9.05602E-05	0.000103097	0.000393568	0.004090439	0.853775664	4.20635E-06	8.85237E-05	8.46942E-05	0.000134202
SAN BERNARDINO	2020	MH	Aggregated	35	DSL	1241.612258	0.000111239	0.000126638	0.000533946	0.006454224	1.397849317	5.16683E-06	0.000138608	0.000132612	0.000219722
SAN BERNARDINO	2020	MH	Aggregated	55	DSL	1674.987495	0.000104979	0.000119512	0.000540215	0.007799411	1.675578512	4.87608E-06	0.000239229	0.00022888	0.000263378
SAN BERNARDINO	2020	MHDT	Aggregated	5	DSL	346.9018778	0.000590907	0.000672703	0.001005674	0.003823656	0.923581028	2.74461E-05	8.83987E-05	8.45746E-05	0.000145174
SAN BERNARDINO	2020	MHDT	Aggregated	10	DSL	7118.425785	0.009142303	0.010407816	0.015975744	0.063641585	16.05489318	0.000424636	0.001538275	0.00147173	0.002523606
SAN BERNARDINO	2020	MHDT	Aggregated	15	DSL	13059.56608	0.008736902	0.009946297	0.018643646	0.08392567	23.52817209	0.000405806	0.001993372	0.00190714	0.003698301
SAN BERNARDINO	2020	MHDT	Aggregated	25	DSL	48701.25011	0.011719068	0.013341267	0.037291512	0.213290724	65.65029763	0.00054432	0.004400069	0.004209724	0.010319313
SAN BERNARDINO	2020	MHDT	Aggregated	35	DSL	90355.35549	0.014585345	0.016604305	0.051436209	0.306668038	98.804661	0.000677452	0.006923971	0.006624443	0.015530717
SAN BERNARDINO	2020	MHDT	Aggregated	55	DSL	114027.2296	0.012411791	0.014129879	0.050091529	0.318290561	109.0682243	0.000576496	0.011648949	0.011145021	0.017144006
SAN BERNARDINO	2020	OBUS	Aggregated	5	DSL	6.305199196	1.33327E-05	1.51782E-05	2.36549E-05	8.74576E-05	0.020780691	6.19268E-07	2.19429E-06	2.09936E-06	3.26644E-06
SAN BERNARDINO	2020	OBUS	Aggregated	10	DSL	132.9115818	0.000212395	0.000241795	0.000388644	0.001481853	0.371235445	9.86518E-06	3.78826E-05	3.62438E-05	5.8353E-05
SAN BERNARDINO	2020	OBUS	Aggregated	15	DSL	219.1669243	0.000176117	0.000200496	0.000403896	0.00167394	0.473006546	8.18017E-06	4.08661E-05	3.90983E-05	7.435E-05
SAN BERNARDINO	2020	OBUS	Aggregated	25	DSL	843.6756157	0.000236215	0.000268913	0.00086873	0.004434995	1.37328749	1.09716E-05	8.04796E-05	7.69981E-05	0.000215862
SAN BERNARDINO	2020	OBUS	Aggregated	35	DSL	1597.551128	0.000285143	0.000324614	0.001146776	0.00644146	2.110843452	1.32442E-05	0.000116175	0.000111149	0.000331795
SAN BERNARDINO	2020	OBUS	Aggregated	55	DSL	1995.812577	0.000252546	0.000287504	0.000932712	0.006767824	2.318141265	1.17301E-05	0.000181214	0.000173375	0.00036438
SAN BERNARDINO	2020	SBUS	Aggregated	5	DSL	429.2077105	0.000336928	0.000383567	0.000556159	0.008100469	1.158072048	1.56494E-05	7.01574E-05	6.71224E-05	0.000182033
SAN BERNARDINO	2020	SBUS	Aggregated	10	DSL	1504.351026	0.000899385	0.001023882	0.001529256	0.023277789	3.537642951	4.17741E-05	0.000205007	0.000196138	0.000556068
SAN BERNARDINO	2020	SBUS	Aggregated	15	DSL	3008.702053	0.000968885	0.001103002	0.002074097	0.032729547	5.722037233	4.50022E-05	0.00027799	0.000265964	0.000899425
SAN BERNARDINO	2020	SBUS	Aggregated	25	DSL	6446.590143	0.000742298	0.000845049	0.002535908	0.049799948	9.12469161	3.44778E-05	0.000322476	0.000308526	0.001434274
SAN BERNARDINO	2020	SBUS	Aggregated	35	DSL	7938.196932	0.000600206	0.000683289	0.002166778	0.054375205	9.501060304	2.7878E-05	0.000306845	0.000293571	0.001493434
SAN BERNARDINO	2020	SBUS	Aggregated	55	DSL	1916.544747	0.000101746	0.00011583	0.000331028	0.012310074	2.025113343	4.72583E-06	8.16873E-05	7.81536E-05	0.00031832
SAN BERNARDINO	2020	UBUS	Aggregated	5	DSL	5.540603495	3.68563E-08	2.36242E-06	3.71695E-06	3.32917E-05	0.01414214	2.31058E-06	6.2681E-08	5.99694E-08	2.22295E-06
SAN BERNARDINO	2020	UBUS	Aggregated	10	DSL	17.90923202	9.20754E-08	6.15255E-06	9.46722E-06	9.08819E-05	0.039709146	6.02181E-06	1.83208E-07	1.75283E-07	6.24172E-06
SAN BERNARDINO	2020	UBUS	Aggregated	15	DSL	31.46293635	1.16298E-07	7.62521E-06	1.15024E-05	0.000124974	0.057752848	7.4609E-06	2.77485E-07	2.65481E-07	9.07794E-06
SAN BERNARDINO	2020	UBUS	Aggregated	25	DSL	2.827098377	2.12474E-08	4.20806E-07	6.6532E-07	9.65921E-06	0.003744928	3.9564E-07	2.5483E-08	2.43806E-08	5.88651E-07
SAN BERNARDINO	2020	UBUS	Aggregated	35	DSL	4.026564026	2.0989E-08	3.27655E-07	5.33809E-07	1.18969E-05	0.004611946	3.03231E-07	3.21026E-08	3.07138E-08	7.24934E-07
SAN BERNARDINO	2020	UBUS	Aggregated	55	DSL	5.277476395	2.3896E-08	1.46324E-07	2.91949E-07	1.15426E-05	0.00503712	1.19638E-07	4.25324E-08	4.06924E-08	7.91765E-07

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SAN BERNARDINO
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW	PM10_TOTAL	Fuel Consumption
SAN BERNARDINO	2020	HHDT	Aggregated	Aggregated	DSL	27707.12036	3999354.561	323735.258	0.277088304	0.006074528	0	0.283162832	0.157261547	0.269703554	0.710127933	601.5883003
SAN BERNARDINO	2020	LDA	Aggregated	Aggregated	DSL	6569.597379	293430.672	31275.43473	0.003150044	0	0	0.003150044	0.002587616	0.011886859	0.017624519	6.019564726
SAN BERNARDINO	2020	LDT1	Aggregated	Aggregated	DSL	59.61067403	1067.91221	194.7341318	0.000220171	0	0	0.000220171	9.41737E-06	4.32611E-05	0.000272849	0.043495937
SAN BERNARDINO	2020	LDT2	Aggregated	Aggregated	DSL	1267.752516	57700.70142	6291.570094	0.0003996	0	0	0.0003996	0.000508833	0.002337452	0.003245885	1.603351115
SAN BERNARDINO	2020	LHDT1	Aggregated	Aggregated	DSL	22885.62044	834808.4108	287872.3151	0.022281636	0.000699992	0	0.022981628	0.011042625	0.070341522	0.104365774	40.91255854
SAN BERNARDINO	2020	LHDT2	Aggregated	Aggregated	DSL	8374.806617	309443.7659	105344.5317	0.00738534	0.000254529	0	0.007639868	0.00409324	0.030419598	0.042152707	16.51891494
SAN BERNARDINO	2020	MDV	Aggregated	Aggregated	DSL	4030.525416	178779.223	19675.70218	0.001345959	0	0	0.001345959	0.001576563	0.007242336	0.010164858	6.702914482
SAN BERNARDINO	2020	MH	Aggregated	Aggregated	DSL	2509.935164	22311.17182	250.9935164	0.003875096	0	0	0.003875096	0.000393502	0.003205563	0.007474161	2.110224855
SAN BERNARDINO	2020	MHDT	Aggregated	Aggregated	DSL	17407.57983	1156917.918	170883.8159	0.113378646	0.000594648	0	0.113973294	0.015303404	0.166220478	0.295497177	111.1306722
SAN BERNARDINO	2020	OBUS	Aggregated	Aggregated	DSL	295.2661824	21583.3235	2892.999704	0.002077791	3.89654E-05	0	0.002116757	0.000285498	0.00310099	0.005503245	2.624566757
SAN BERNARDINO	2020	SBUS	Aggregated	Aggregated	DSL	1359.536592	43345.57897	15688.86378	0.002238253	9.06839E-05	0	0.002328936	0.000573364	0.035586784	0.038489084	5.736830668
SAN BERNARDINO	2020	UBUS	Aggregated	Aggregated	DSL	5.036807361	438.6321227	20.14722944	3.894E-06	0	0	3.894E-06	8.75532E-06	5.30924E-05	6.57417E-05	0.059645567

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** AERMOD Input Produced by:
** AERMOD View Ver. 9.8.3
** Lakes Environmental Software Inc.
** Date: 5/27/2020
** File: C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande_rev\Fontana_Sierra Casa
Grande.ADI
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** AERMOD Control Pathway
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   AVERTIME 1 24 ANNUAL
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Fontana_Sierra Casa Grande.err"
CO FINISHED
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** AERMOD Source Pathway
**************************************
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**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Sierra Avenue - I-15 to Casa Grande
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 0.0000151
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 9
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LOCATION L0004583     VOLUME   459802.686 3780299.767 547.51
LOCATION L0004584     VOLUME   459802.647 3780294.767 547.37
LOCATION L0004585     VOLUME   459802.609 3780289.767 547.24
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LOCATION L0004594     VOLUME   459802.262 3780244.769 546.01
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LOCATION L0004600     VOLUME   459802.030 3780214.769 545.21
LOCATION L0004601     VOLUME   459801.991 3780209.770 545.06
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LOCATION L0004605     VOLUME   459801.837 3780189.770 544.48
LOCATION L0004606     VOLUME   459801.799 3780184.770 544.33
LOCATION L0004607     VOLUME   459801.760 3780179.770 544.18
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LOCATION L0004662     VOLUME   459799.638 3779904.779 535.81
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LOCATION L0004665     VOLUME   459799.522 3779889.779 535.39
LOCATION L0004666     VOLUME   459799.484 3779884.779 535.26
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LOCATION L0004681     VOLUME   459798.905 3779809.781 532.99
LOCATION L0004682     VOLUME   459798.867 3779804.782 532.86
LOCATION L0004683     VOLUME   459798.828 3779799.782 532.73
LOCATION L0004684     VOLUME   459798.789 3779794.782 532.60
LOCATION L0004685     VOLUME   459798.751 3779789.782 532.47
LOCATION L0004686     VOLUME   459798.712 3779784.782 532.34
LOCATION L0004687     VOLUME   459798.674 3779779.782 532.22
LOCATION L0004688     VOLUME   459798.635 3779774.782 532.09
LOCATION L0004689     VOLUME   459798.597 3779769.783 531.97
LOCATION L0004690     VOLUME   459798.558 3779764.783 531.85
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   LOCATION L0004694     VOLUME   459798.404 3779744.783 531.34
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Sierra Avenue - SR-210 to Casa Grande
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 0.000123
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 4
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** 459791.705, 3777552.074, 473.30, 3.70, 2.33
** 459798.663, 3778918.242, 508.32, 3.70, 2.33
** 459798.334, 3779742.591, 531.33, 3.70, 2.33
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   LOCATION L0004721     VOLUME   459792.516 3777519.926 472.42
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LOCATION L0004890     VOLUME   459795.845 3778364.905 493.65
LOCATION L0004891     VOLUME   459795.870 3778369.905 493.79
LOCATION L0004892     VOLUME   459795.896 3778374.905 493.92
LOCATION L0004893     VOLUME   459795.921 3778379.905 494.06
LOCATION L0004894     VOLUME   459795.947 3778384.905 494.19
LOCATION L0004895     VOLUME   459795.972 3778389.905 494.33
LOCATION L0004896     VOLUME   459795.998 3778394.905 494.46
LOCATION L0004897     VOLUME   459796.023 3778399.905 494.58
LOCATION L0004898     VOLUME   459796.048 3778404.905 494.70
LOCATION L0004899     VOLUME   459796.074 3778409.905 494.82
LOCATION L0004900     VOLUME   459796.099 3778414.904 494.94
LOCATION L0004901     VOLUME   459796.125 3778419.904 495.06
LOCATION L0004902     VOLUME   459796.150 3778424.904 495.18
LOCATION L0004903     VOLUME   459796.176 3778429.904 495.31
LOCATION L0004904     VOLUME   459796.201 3778434.904 495.45
LOCATION L0004905     VOLUME   459796.227 3778439.904 495.60
LOCATION L0004906     VOLUME   459796.252 3778444.904 495.74
LOCATION L0004907     VOLUME   459796.278 3778449.904 495.88
LOCATION L0004908     VOLUME   459796.303 3778454.904 496.02
LOCATION L0004909     VOLUME   459796.329 3778459.904 496.16
LOCATION L0004910     VOLUME   459796.354 3778464.904 496.28
LOCATION L0004911     VOLUME   459796.380 3778469.904 496.40
LOCATION L0004912     VOLUME   459796.405 3778474.904 496.53
LOCATION L0004913     VOLUME   459796.430 3778479.904 496.65
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LOCATION L0004914     VOLUME   459796.456 3778484.904 496.77
LOCATION L0004915     VOLUME   459796.481 3778489.903 496.90
LOCATION L0004916     VOLUME   459796.507 3778494.903 497.05
LOCATION L0004917     VOLUME   459796.532 3778499.903 497.20
LOCATION L0004918     VOLUME   459796.558 3778504.903 497.35
LOCATION L0004919     VOLUME   459796.583 3778509.903 497.50
LOCATION L0004920     VOLUME   459796.609 3778514.903 497.64
LOCATION L0004921     VOLUME   459796.634 3778519.903 497.79
LOCATION L0004922     VOLUME   459796.660 3778524.903 497.94
LOCATION L0004923     VOLUME   459796.685 3778529.903 498.09
LOCATION L0004924     VOLUME   459796.711 3778534.903 498.25
LOCATION L0004925     VOLUME   459796.736 3778539.903 498.40
LOCATION L0004926     VOLUME   459796.762 3778544.903 498.55
LOCATION L0004927     VOLUME   459796.787 3778549.903 498.70
LOCATION L0004928     VOLUME   459796.813 3778554.903 498.84
LOCATION L0004929     VOLUME   459796.838 3778559.903 498.97
LOCATION L0004930     VOLUME   459796.863 3778564.903 499.11
LOCATION L0004931     VOLUME   459796.889 3778569.902 499.24
LOCATION L0004932     VOLUME   459796.914 3778574.902 499.38
LOCATION L0004933     VOLUME   459796.940 3778579.902 499.51
LOCATION L0004934     VOLUME   459796.965 3778584.902 499.66
LOCATION L0004935     VOLUME   459796.991 3778589.902 499.81
LOCATION L0004936     VOLUME   459797.016 3778594.902 499.96
LOCATION L0004937     VOLUME   459797.042 3778599.902 500.11
LOCATION L0004938     VOLUME   459797.067 3778604.902 500.26
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LOCATION L0004945     VOLUME   459797.245 3778639.902 501.16
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LOCATION L0004947     VOLUME   459797.296 3778649.901 501.40
LOCATION L0004948     VOLUME   459797.322 3778654.901 501.51
LOCATION L0004949     VOLUME   459797.347 3778659.901 501.63
LOCATION L0004950     VOLUME   459797.373 3778664.901 501.74
LOCATION L0004951     VOLUME   459797.398 3778669.901 501.86
LOCATION L0004952     VOLUME   459797.424 3778674.901 501.98
LOCATION L0004953     VOLUME   459797.449 3778679.901 502.12
LOCATION L0004954     VOLUME   459797.475 3778684.901 502.26
LOCATION L0004955     VOLUME   459797.500 3778689.901 502.39
LOCATION L0004956     VOLUME   459797.526 3778694.901 502.53
LOCATION L0004957     VOLUME   459797.551 3778699.901 502.67
LOCATION L0004958     VOLUME   459797.577 3778704.901 502.81
LOCATION L0004959     VOLUME   459797.602 3778709.901 502.96
LOCATION L0004960     VOLUME   459797.627 3778714.901 503.10
LOCATION L0004961     VOLUME   459797.653 3778719.901 503.25
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LOCATION L0004962     VOLUME   459797.678 3778724.900 503.39
LOCATION L0004963     VOLUME   459797.704 3778729.900 503.54
LOCATION L0004964     VOLUME   459797.729 3778734.900 503.69
LOCATION L0004965     VOLUME   459797.755 3778739.900 503.81
LOCATION L0004966     VOLUME   459797.780 3778744.900 503.94
LOCATION L0004967     VOLUME   459797.806 3778749.900 504.07
LOCATION L0004968     VOLUME   459797.831 3778754.900 504.20
LOCATION L0004969     VOLUME   459797.857 3778759.900 504.32
LOCATION L0004970     VOLUME   459797.882 3778764.900 504.45
LOCATION L0004971     VOLUME   459797.908 3778769.900 504.58
LOCATION L0004972     VOLUME   459797.933 3778774.900 504.70
LOCATION L0004973     VOLUME   459797.959 3778779.900 504.82
LOCATION L0004974     VOLUME   459797.984 3778784.900 504.94
LOCATION L0004975     VOLUME   459798.009 3778789.900 505.07
LOCATION L0004976     VOLUME   459798.035 3778794.900 505.19
LOCATION L0004977     VOLUME   459798.060 3778799.899 505.32
LOCATION L0004978     VOLUME   459798.086 3778804.899 505.45
LOCATION L0004979     VOLUME   459798.111 3778809.899 505.58
LOCATION L0004980     VOLUME   459798.137 3778814.899 505.72
LOCATION L0004981     VOLUME   459798.162 3778819.899 505.85
LOCATION L0004982     VOLUME   459798.188 3778824.899 505.98
LOCATION L0004983     VOLUME   459798.213 3778829.899 506.12
LOCATION L0004984     VOLUME   459798.239 3778834.899 506.25
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LOCATION L0004987     VOLUME   459798.315 3778849.899 506.65
LOCATION L0004988     VOLUME   459798.341 3778854.899 506.78
LOCATION L0004989     VOLUME   459798.366 3778859.899 506.92
LOCATION L0004990     VOLUME   459798.391 3778864.899 507.05
LOCATION L0004991     VOLUME   459798.417 3778869.899 507.18
LOCATION L0004992     VOLUME   459798.442 3778874.898 507.32
LOCATION L0004993     VOLUME   459798.468 3778879.898 507.45
LOCATION L0004994     VOLUME   459798.493 3778884.898 507.58
LOCATION L0004995     VOLUME   459798.519 3778889.898 507.71
LOCATION L0004996     VOLUME   459798.544 3778894.898 507.82
LOCATION L0004997     VOLUME   459798.570 3778899.898 507.93
LOCATION L0004998     VOLUME   459798.595 3778904.898 508.04
LOCATION L0004999     VOLUME   459798.621 3778909.898 508.15
LOCATION L0005000     VOLUME   459798.646 3778914.898 508.25
LOCATION L0005001     VOLUME   459798.663 3778919.898 508.36
LOCATION L0005002     VOLUME   459798.661 3778924.898 508.50
LOCATION L0005003     VOLUME   459798.659 3778929.898 508.63
LOCATION L0005004     VOLUME   459798.657 3778934.898 508.77
LOCATION L0005005     VOLUME   459798.655 3778939.898 508.91
LOCATION L0005006     VOLUME   459798.653 3778944.898 509.04
LOCATION L0005007     VOLUME   459798.651 3778949.898 509.18
LOCATION L0005008     VOLUME   459798.649 3778954.898 509.32
LOCATION L0005009     VOLUME   459798.647 3778959.898 509.46
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LOCATION L0005010     VOLUME   459798.645 3778964.898 509.60
LOCATION L0005011     VOLUME   459798.643 3778969.898 509.74
LOCATION L0005012     VOLUME   459798.641 3778974.898 509.87
LOCATION L0005013     VOLUME   459798.639 3778979.898 510.01
LOCATION L0005014     VOLUME   459798.637 3778984.898 510.16
LOCATION L0005015     VOLUME   459798.635 3778989.898 510.30
LOCATION L0005016     VOLUME   459798.633 3778994.898 510.44
LOCATION L0005017     VOLUME   459798.631 3778999.898 510.59
LOCATION L0005018     VOLUME   459798.629 3779004.898 510.73
LOCATION L0005019     VOLUME   459798.627 3779009.898 510.87
LOCATION L0005020     VOLUME   459798.625 3779014.898 511.02
LOCATION L0005021     VOLUME   459798.623 3779019.898 511.16
LOCATION L0005022     VOLUME   459798.621 3779024.898 511.31
LOCATION L0005023     VOLUME   459798.619 3779029.898 511.45
LOCATION L0005024     VOLUME   459798.617 3779034.898 511.59
LOCATION L0005025     VOLUME   459798.615 3779039.898 511.74
LOCATION L0005026     VOLUME   459798.613 3779044.898 511.89
LOCATION L0005027     VOLUME   459798.611 3779049.898 512.04
LOCATION L0005028     VOLUME   459798.609 3779054.898 512.20
LOCATION L0005029     VOLUME   459798.607 3779059.898 512.35
LOCATION L0005030     VOLUME   459798.605 3779064.898 512.51
LOCATION L0005031     VOLUME   459798.603 3779069.898 512.66
LOCATION L0005032     VOLUME   459798.601 3779074.898 512.81
LOCATION L0005033     VOLUME   459798.599 3779079.898 512.94
LOCATION L0005034     VOLUME   459798.597 3779084.898 513.06
LOCATION L0005035     VOLUME   459798.595 3779089.898 513.19
LOCATION L0005036     VOLUME   459798.593 3779094.898 513.32
LOCATION L0005037     VOLUME   459798.591 3779099.898 513.45
LOCATION L0005038     VOLUME   459798.589 3779104.898 513.57
LOCATION L0005039     VOLUME   459798.587 3779109.898 513.68
LOCATION L0005040     VOLUME   459798.585 3779114.898 513.79
LOCATION L0005041     VOLUME   459798.583 3779119.898 513.90
LOCATION L0005042     VOLUME   459798.581 3779124.898 514.01
LOCATION L0005043     VOLUME   459798.579 3779129.898 514.12
LOCATION L0005044     VOLUME   459798.577 3779134.898 514.23
LOCATION L0005045     VOLUME   459798.575 3779139.898 514.34
LOCATION L0005046     VOLUME   459798.573 3779144.898 514.46
LOCATION L0005047     VOLUME   459798.571 3779149.898 514.58
LOCATION L0005048     VOLUME   459798.569 3779154.898 514.70
LOCATION L0005049     VOLUME   459798.567 3779159.898 514.81
LOCATION L0005050     VOLUME   459798.565 3779164.898 514.93
LOCATION L0005051     VOLUME   459798.563 3779169.898 515.05
LOCATION L0005052     VOLUME   459798.561 3779174.898 515.18
LOCATION L0005053     VOLUME   459798.559 3779179.898 515.30
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LOCATION L0005055     VOLUME   459798.555 3779189.898 515.55
LOCATION L0005056     VOLUME   459798.553 3779194.898 515.68
LOCATION L0005057     VOLUME   459798.551 3779199.898 515.80
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LOCATION L0005059     VOLUME   459798.547 3779209.898 516.06
LOCATION L0005060     VOLUME   459798.545 3779214.898 516.19
LOCATION L0005061     VOLUME   459798.543 3779219.898 516.32
LOCATION L0005062     VOLUME   459798.541 3779224.898 516.45
LOCATION L0005063     VOLUME   459798.539 3779229.898 516.58
LOCATION L0005064     VOLUME   459798.537 3779234.898 516.71
LOCATION L0005065     VOLUME   459798.535 3779239.898 516.84
LOCATION L0005066     VOLUME   459798.533 3779244.898 516.97
LOCATION L0005067     VOLUME   459798.531 3779249.898 517.10
LOCATION L0005068     VOLUME   459798.529 3779254.898 517.23
LOCATION L0005069     VOLUME   459798.527 3779259.898 517.36
LOCATION L0005070     VOLUME   459798.525 3779264.898 517.50
LOCATION L0005071     VOLUME   459798.523 3779269.898 517.64
LOCATION L0005072     VOLUME   459798.521 3779274.898 517.78
LOCATION L0005073     VOLUME   459798.519 3779279.898 517.92
LOCATION L0005074     VOLUME   459798.517 3779284.898 518.06
LOCATION L0005075     VOLUME   459798.515 3779289.898 518.20
LOCATION L0005076     VOLUME   459798.513 3779294.898 518.35
LOCATION L0005077     VOLUME   459798.511 3779299.898 518.50
LOCATION L0005078     VOLUME   459798.509 3779304.898 518.66
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LOCATION L0005080     VOLUME   459798.505 3779314.898 518.97
LOCATION L0005081     VOLUME   459798.503 3779319.898 519.12
LOCATION L0005082     VOLUME   459798.501 3779324.898 519.26
LOCATION L0005083     VOLUME   459798.499 3779329.898 519.41
LOCATION L0005084     VOLUME   459798.497 3779334.898 519.55
LOCATION L0005085     VOLUME   459798.495 3779339.898 519.70
LOCATION L0005086     VOLUME   459798.493 3779344.898 519.84
LOCATION L0005087     VOLUME   459798.491 3779349.898 519.99
LOCATION L0005088     VOLUME   459798.489 3779354.898 520.11
LOCATION L0005089     VOLUME   459798.487 3779359.898 520.22
LOCATION L0005090     VOLUME   459798.485 3779364.898 520.33
LOCATION L0005091     VOLUME   459798.483 3779369.898 520.44
LOCATION L0005092     VOLUME   459798.481 3779374.898 520.56
LOCATION L0005093     VOLUME   459798.479 3779379.898 520.67
LOCATION L0005094     VOLUME   459798.477 3779384.898 520.79
LOCATION L0005095     VOLUME   459798.475 3779389.898 520.93
LOCATION L0005096     VOLUME   459798.473 3779394.898 521.06
LOCATION L0005097     VOLUME   459798.471 3779399.898 521.19
LOCATION L0005098     VOLUME   459798.469 3779404.898 521.32
LOCATION L0005099     VOLUME   459798.467 3779409.898 521.45
LOCATION L0005100     VOLUME   459798.465 3779414.898 521.59
LOCATION L0005101     VOLUME   459798.463 3779419.898 521.72
LOCATION L0005102     VOLUME   459798.461 3779424.898 521.86
LOCATION L0005103     VOLUME   459798.459 3779429.898 521.99
LOCATION L0005104     VOLUME   459798.457 3779434.898 522.13
LOCATION L0005105     VOLUME   459798.455 3779439.898 522.27
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LOCATION L0005106     VOLUME   459798.453 3779444.898 522.41
LOCATION L0005107     VOLUME   459798.451 3779449.898 522.55
LOCATION L0005108     VOLUME   459798.449 3779454.898 522.70
LOCATION L0005109     VOLUME   459798.447 3779459.898 522.84
LOCATION L0005110     VOLUME   459798.445 3779464.898 522.99
LOCATION L0005111     VOLUME   459798.443 3779469.898 523.13
LOCATION L0005112     VOLUME   459798.441 3779474.898 523.28
LOCATION L0005113     VOLUME   459798.439 3779479.898 523.42
LOCATION L0005114     VOLUME   459798.437 3779484.898 523.55
LOCATION L0005115     VOLUME   459798.435 3779489.898 523.69
LOCATION L0005116     VOLUME   459798.433 3779494.898 523.83
LOCATION L0005117     VOLUME   459798.431 3779499.898 523.97
LOCATION L0005118     VOLUME   459798.429 3779504.898 524.11
LOCATION L0005119     VOLUME   459798.427 3779509.898 524.25
LOCATION L0005120     VOLUME   459798.425 3779514.898 524.39
LOCATION L0005121     VOLUME   459798.423 3779519.898 524.53
LOCATION L0005122     VOLUME   459798.421 3779524.898 524.67
LOCATION L0005123     VOLUME   459798.419 3779529.898 524.81
LOCATION L0005124     VOLUME   459798.417 3779534.898 524.95
LOCATION L0005125     VOLUME   459798.415 3779539.898 525.09
LOCATION L0005126     VOLUME   459798.413 3779544.898 525.24
LOCATION L0005127     VOLUME   459798.411 3779549.898 525.38
LOCATION L0005128     VOLUME   459798.409 3779554.898 525.53
LOCATION L0005129     VOLUME   459798.407 3779559.898 525.67
LOCATION L0005130     VOLUME   459798.405 3779564.898 525.82
LOCATION L0005131     VOLUME   459798.403 3779569.898 525.96
LOCATION L0005132     VOLUME   459798.401 3779574.898 526.11
LOCATION L0005133     VOLUME   459798.399 3779579.898 526.25
LOCATION L0005134     VOLUME   459798.397 3779584.898 526.40
LOCATION L0005135     VOLUME   459798.395 3779589.898 526.54
LOCATION L0005136     VOLUME   459798.393 3779594.898 526.68
LOCATION L0005137     VOLUME   459798.391 3779599.898 526.83
LOCATION L0005138     VOLUME   459798.389 3779604.898 526.98
LOCATION L0005139     VOLUME   459798.387 3779609.898 527.13
LOCATION L0005140     VOLUME   459798.385 3779614.898 527.29
LOCATION L0005141     VOLUME   459798.383 3779619.898 527.44
LOCATION L0005142     VOLUME   459798.381 3779624.898 527.59
LOCATION L0005143     VOLUME   459798.379 3779629.898 527.74
LOCATION L0005144     VOLUME   459798.377 3779634.898 527.90
LOCATION L0005145     VOLUME   459798.375 3779639.898 528.06
LOCATION L0005146     VOLUME   459798.373 3779644.898 528.22
LOCATION L0005147     VOLUME   459798.371 3779649.898 528.38
LOCATION L0005148     VOLUME   459798.369 3779654.898 528.54
LOCATION L0005149     VOLUME   459798.367 3779659.898 528.70
LOCATION L0005150     VOLUME   459798.365 3779664.898 528.86
LOCATION L0005151     VOLUME   459798.363 3779669.898 529.02
LOCATION L0005152     VOLUME   459798.361 3779674.898 529.19
LOCATION L0005153     VOLUME   459798.359 3779679.898 529.35
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   LOCATION L0005154     VOLUME   459798.357 3779684.898 529.52
   LOCATION L0005155     VOLUME   459798.355 3779689.898 529.68
   LOCATION L0005156     VOLUME   459798.353 3779694.898 529.84
   LOCATION L0005157     VOLUME   459798.351 3779699.898 530.01
   LOCATION L0005158     VOLUME   459798.349 3779704.898 530.17
   LOCATION L0005159     VOLUME   459798.347 3779709.898 530.33
   LOCATION L0005160     VOLUME   459798.345 3779714.898 530.49
   LOCATION L0005161     VOLUME   459798.343 3779719.898 530.66
   LOCATION L0005162     VOLUME   459798.341 3779724.898 530.80
   LOCATION L0005163     VOLUME   459798.339 3779729.898 530.93
   LOCATION L0005164     VOLUME   459798.337 3779734.898 531.07
   LOCATION L0005165     VOLUME   459798.335 3779739.898 531.20
** End of LINE VOLUME Source ID = SLINE2
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Casa Grande - to W Driveway
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 6.82E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459801.241, 3779743.383, 531.30, 3.70, 2.33
** 459898.250, 3779742.782, 531.23, 3.70, 2.33
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   LOCATION L0005166     VOLUME   459803.741 3779743.367 531.29
   LOCATION L0005167     VOLUME   459808.741 3779743.337 531.29
   LOCATION L0005168     VOLUME   459813.741 3779743.306 531.28
   LOCATION L0005169     VOLUME   459818.741 3779743.275 531.31
   LOCATION L0005170     VOLUME   459823.741 3779743.244 531.34
   LOCATION L0005171     VOLUME   459828.741 3779743.213 531.37
   LOCATION L0005172     VOLUME   459833.741 3779743.182 531.40
   LOCATION L0005173     VOLUME   459838.741 3779743.151 531.43
   LOCATION L0005174     VOLUME   459843.741 3779743.120 531.39
   LOCATION L0005175     VOLUME   459848.741 3779743.089 531.35
   LOCATION L0005176     VOLUME   459853.740 3779743.058 531.31
   LOCATION L0005177     VOLUME   459858.740 3779743.027 531.27
   LOCATION L0005178     VOLUME   459863.740 3779742.996 531.23
   LOCATION L0005179     VOLUME   459868.740 3779742.965 531.21
   LOCATION L0005180     VOLUME   459873.740 3779742.934 531.20
   LOCATION L0005181     VOLUME   459878.740 3779742.903 531.19
   LOCATION L0005182     VOLUME   459883.740 3779742.872 531.17
   LOCATION L0005183     VOLUME   459888.740 3779742.841 531.16
   LOCATION L0005184     VOLUME   459893.740 3779742.810 531.18
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Casa Grande - W Driveway to E Driveway
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 6.88E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459895.547, 3779743.108, 531.26, 3.70, 2.33
** 460091.098, 3779742.189, 530.62, 3.70, 2.33
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   LOCATION L0005186     VOLUME   459903.047 3779743.073 531.24
   LOCATION L0005187     VOLUME   459908.046 3779743.049 531.27
   LOCATION L0005188     VOLUME   459913.046 3779743.026 531.30
   LOCATION L0005189     VOLUME   459918.046 3779743.002 531.32
   LOCATION L0005190     VOLUME   459923.046 3779742.979 531.33
   LOCATION L0005191     VOLUME   459928.046 3779742.955 531.33
   LOCATION L0005192     VOLUME   459933.046 3779742.932 531.34
   LOCATION L0005193     VOLUME   459938.046 3779742.908 531.35
   LOCATION L0005194     VOLUME   459943.046 3779742.885 531.36
   LOCATION L0005195     VOLUME   459948.046 3779742.861 531.37
   LOCATION L0005196     VOLUME   459953.046 3779742.838 531.38
   LOCATION L0005197     VOLUME   459958.046 3779742.814 531.39
   LOCATION L0005198     VOLUME   459963.046 3779742.791 531.40
   LOCATION L0005199     VOLUME   459968.046 3779742.767 531.42
   LOCATION L0005200     VOLUME   459973.046 3779742.744 531.42
   LOCATION L0005201     VOLUME   459978.046 3779742.720 531.43
   LOCATION L0005202     VOLUME   459983.046 3779742.697 531.44
   LOCATION L0005203     VOLUME   459988.046 3779742.673 531.44
   LOCATION L0005204     VOLUME   459993.046 3779742.650 531.45
   LOCATION L0005205     VOLUME   459998.045 3779742.626 531.43
   LOCATION L0005206     VOLUME   460003.045 3779742.603 531.42
   LOCATION L0005207     VOLUME   460008.045 3779742.579 531.41
   LOCATION L0005208     VOLUME   460013.045 3779742.556 531.39
   LOCATION L0005209     VOLUME   460018.045 3779742.532 531.38
   LOCATION L0005210     VOLUME   460023.045 3779742.509 531.35
   LOCATION L0005211     VOLUME   460028.045 3779742.485 531.33
   LOCATION L0005212     VOLUME   460033.045 3779742.462 531.30
   LOCATION L0005213     VOLUME   460038.045 3779742.438 531.27
   LOCATION L0005214     VOLUME   460043.045 3779742.415 531.25
   LOCATION L0005215     VOLUME   460048.045 3779742.391 531.19
   LOCATION L0005216     VOLUME   460053.045 3779742.368 531.14
   LOCATION L0005217     VOLUME   460058.045 3779742.345 531.08
   LOCATION L0005218     VOLUME   460063.045 3779742.321 531.02
   LOCATION L0005219     VOLUME   460068.045 3779742.298 530.96
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   LOCATION L0005220     VOLUME   460073.045 3779742.274 530.88
   LOCATION L0005221     VOLUME   460078.045 3779742.251 530.80
   LOCATION L0005222     VOLUME   460083.045 3779742.227 530.71
   LOCATION L0005223     VOLUME   460088.044 3779742.204 530.63
** End of LINE VOLUME Source ID = SLINE4
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC W Driveway Site Entrance
** PREFIX
** Length of Side = 3.60
** Configuration = Adjacent
** Emission Rate = 1.29E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459893.712, 3779746.170, 531.35, 3.70, 1.67
** 459893.731, 3779794.306, 532.16, 3.70, 1.67
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   LOCATION L0005224     VOLUME   459893.713 3779747.970 531.33
   LOCATION L0005225     VOLUME   459893.714 3779751.570 531.43
   LOCATION L0005226     VOLUME   459893.715 3779755.170 531.52
   LOCATION L0005227     VOLUME   459893.717 3779758.770 531.61
   LOCATION L0005228     VOLUME   459893.718 3779762.370 531.70
   LOCATION L0005229     VOLUME   459893.720 3779765.970 531.79
   LOCATION L0005230     VOLUME   459893.721 3779769.570 531.88
   LOCATION L0005231     VOLUME   459893.722 3779773.170 531.97
   LOCATION L0005232     VOLUME   459893.724 3779776.770 532.06
   LOCATION L0005233     VOLUME   459893.725 3779780.370 532.15
   LOCATION L0005234     VOLUME   459893.727 3779783.970 532.24
   LOCATION L0005235     VOLUME   459893.728 3779787.570 532.34
   LOCATION L0005236     VOLUME   459893.729 3779791.170 532.43
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC E Driveway Site Entrance
** PREFIX
** Length of Side = 3.60
** Configuration = Adjacent
** Emission Rate = 2.17E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 7
** 460090.758, 3779744.694, 530.67, 3.70, 1.67
** 460090.095, 3779762.221, 530.94, 3.70, 1.67
** 460086.997, 3779781.927, 531.44, 3.70, 1.67
** 460077.401, 3779792.244, 531.53, 3.70, 1.67
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** 460067.742, 3779796.355, 531.63, 3.70, 1.67
** 460060.925, 3779797.620, 531.67, 3.70, 1.67
** 460048.929, 3779798.445, 531.87, 3.70, 1.67
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   LOCATION L0005238     VOLUME   460090.554 3779750.091 530.79
   LOCATION L0005239     VOLUME   460090.418 3779753.688 530.87
   LOCATION L0005240     VOLUME   460090.282 3779757.285 530.95
   LOCATION L0005241     VOLUME   460090.146 3779760.883 531.03
   LOCATION L0005242     VOLUME   460089.744 3779764.454 531.11
   LOCATION L0005243     VOLUME   460089.185 3779768.011 531.20
   LOCATION L0005244     VOLUME   460088.626 3779771.567 531.28
   LOCATION L0005245     VOLUME   460088.067 3779775.123 531.36
   LOCATION L0005246     VOLUME   460087.507 3779778.680 531.44
   LOCATION L0005247     VOLUME   460086.784 3779782.156 531.53
   LOCATION L0005248     VOLUME   460084.332 3779784.792 531.62
   LOCATION L0005249     VOLUME   460081.880 3779787.428 531.70
   LOCATION L0005250     VOLUME   460079.428 3779790.064 531.79
   LOCATION L0005251     VOLUME   460076.828 3779792.488 531.86
   LOCATION L0005252     VOLUME   460073.515 3779793.898 531.92
   LOCATION L0005253     VOLUME   460070.203 3779795.307 531.96
   LOCATION L0005254     VOLUME   460066.832 3779796.524 532.02
   LOCATION L0005255     VOLUME   460063.292 3779797.180 532.07
   LOCATION L0005256     VOLUME   460059.735 3779797.701 532.12
   LOCATION L0005257     VOLUME   460056.144 3779797.949 532.16
   LOCATION L0005258     VOLUME   460052.552 3779798.196 532.20
   LOCATION L0005259     VOLUME   460048.961 3779798.443 532.24
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC On-SIte Idling
** PREFIX
** Length of Side = 3.60
** Configuration = Adjacent
** Emission Rate = 8.0E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459885.360, 3779829.471, 533.66, 3.70, 1.67
** 460051.862, 3779828.472, 533.05, 3.70, 1.67
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   LOCATION L0005261     VOLUME   459890.760 3779829.439 533.52
   LOCATION L0005262     VOLUME   459894.360 3779829.417 533.55
   LOCATION L0005263     VOLUME   459897.960 3779829.396 533.58
   LOCATION L0005264     VOLUME   459901.560 3779829.374 533.61
   LOCATION L0005265     VOLUME   459905.160 3779829.352 533.65
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   LOCATION L0005266     VOLUME   459908.760 3779829.331 533.68
   LOCATION L0005267     VOLUME   459912.360 3779829.309 533.71
   LOCATION L0005268     VOLUME   459915.960 3779829.288 533.74
   LOCATION L0005269     VOLUME   459919.560 3779829.266 533.74
   LOCATION L0005270     VOLUME   459923.159 3779829.244 533.74
   LOCATION L0005271     VOLUME   459926.759 3779829.223 533.74
   LOCATION L0005272     VOLUME   459930.359 3779829.201 533.74
   LOCATION L0005273     VOLUME   459933.959 3779829.180 533.74
   LOCATION L0005274     VOLUME   459937.559 3779829.158 533.74
   LOCATION L0005275     VOLUME   459941.159 3779829.136 533.74
   LOCATION L0005276     VOLUME   459944.759 3779829.115 533.73
   LOCATION L0005277     VOLUME   459948.359 3779829.093 533.73
   LOCATION L0005278     VOLUME   459951.959 3779829.071 533.72
   LOCATION L0005279     VOLUME   459955.559 3779829.050 533.71
   LOCATION L0005280     VOLUME   459959.159 3779829.028 533.71
   LOCATION L0005281     VOLUME   459962.759 3779829.007 533.70
   LOCATION L0005282     VOLUME   459966.359 3779828.985 533.70
   LOCATION L0005283     VOLUME   459969.959 3779828.963 533.69
   LOCATION L0005284     VOLUME   459973.559 3779828.942 533.68
   LOCATION L0005285     VOLUME   459977.159 3779828.920 533.67
   LOCATION L0005286     VOLUME   459980.758 3779828.899 533.66
   LOCATION L0005287     VOLUME   459984.358 3779828.877 533.66
   LOCATION L0005288     VOLUME   459987.958 3779828.855 533.65
   LOCATION L0005289     VOLUME   459991.558 3779828.834 533.64
   LOCATION L0005290     VOLUME   459995.158 3779828.812 533.62
   LOCATION L0005291     VOLUME   459998.758 3779828.790 533.58
   LOCATION L0005292     VOLUME   460002.358 3779828.769 533.55
   LOCATION L0005293     VOLUME   460005.958 3779828.747 533.52
   LOCATION L0005294     VOLUME   460009.558 3779828.726 533.48
   LOCATION L0005295     VOLUME   460013.158 3779828.704 533.45
   LOCATION L0005296     VOLUME   460016.758 3779828.682 533.42
   LOCATION L0005297     VOLUME   460020.358 3779828.661 533.37
   LOCATION L0005298     VOLUME   460023.958 3779828.639 533.30
   LOCATION L0005299     VOLUME   460027.558 3779828.618 533.24
   LOCATION L0005300     VOLUME   460031.158 3779828.596 533.17
   LOCATION L0005301     VOLUME   460034.757 3779828.574 533.11
   LOCATION L0005302     VOLUME   460038.357 3779828.553 533.04
   LOCATION L0005303     VOLUME   460041.957 3779828.531 532.97
   LOCATION L0005304     VOLUME   460045.557 3779828.510 532.93
   LOCATION L0005305     VOLUME   460049.157 3779828.488 532.91
** End of LINE VOLUME Source ID = SLINE7
** Source Parameters **
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   SRCPARAM L0004174     0.00000002887      3.70      2.33      2.89
   SRCPARAM L0004175     0.00000002887      3.70      2.33      2.89
   SRCPARAM L0004176     0.00000002887      3.70      2.33      2.89
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SRCPARAM L0004331     0.00000002887      3.70      2.33      2.89
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   SRCPARAM L0004702     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0004939     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004940     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0004942     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005083     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005132     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005134     0.0000002611      3.70      2.33      2.89
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   SRCPARAM L0005165     0.0000002611      3.70      2.33      2.89
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   SRCPARAM L0005171     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005172     0.0000003589      3.70      2.33      2.89
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   SRCPARAM L0005177     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005178     0.0000003589      3.70      2.33      2.89
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   SRCPARAM L0005180     0.0000003589      3.70      2.33      2.89
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   SRCPARAM L0005181     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005182     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005183     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005184     0.0000003589      3.70      2.33      2.89
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** LINE VOLUME Source ID = SLINE4
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   SRCPARAM L0005187     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005188     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005189     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005190     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005191     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005192     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005193     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005194     0.0000001764      3.70      2.33      2.89
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   SRCPARAM L0005196     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005197     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005198     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005199     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005200     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005201     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005202     0.0000001764      3.70      2.33      2.89
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   SRCPARAM L0005210     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005211     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005212     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005213     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005214     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005215     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005216     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005217     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005218     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005219     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005220     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005221     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005222     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005223     0.0000001764      3.70      2.33      2.89
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0005224     0.00000009923      3.70      1.67      2.89
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   SRCPARAM L0005225     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005226     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005227     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005228     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005229     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005230     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005231     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005232     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005233     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005234     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005235     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005236     0.00000009923      3.70      1.67      2.89
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0005237     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005238     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005239     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005240     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005241     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005242     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005243     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005244     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005245     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005246     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005247     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005248     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005249     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005250     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005251     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005252     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005253     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005254     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005255     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005256     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005257     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005258     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005259     0.00000009435      3.70      1.67      2.89
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0005260     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005261     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005262     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005263     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005264     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005265     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005266     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005267     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005268     0.0000001739      3.70      1.67      2.89
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   SRCPARAM L0005269     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005270     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005271     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005272     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005273     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005274     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005275     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005276     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005277     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005278     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005279     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005280     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005281     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005282     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005283     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005284     0.0000001739      3.70      1.67      2.89
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   SRCPARAM L0005288     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005289     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005290     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005291     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005292     0.0000001739      3.70      1.67      2.89
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   SRCPARAM L0005294     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005295     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005296     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005297     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005298     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005299     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005300     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005301     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005302     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005303     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005304     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005305     0.0000001739      3.70      1.67      2.89
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   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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**
**
RE STARTING
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   INCLUDED "Fontana_Sierra Casa Grande.rou"
RE FINISHED
**
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** AERMOD Meteorology Pathway
**************************************
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**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
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** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Fontana_Sierra Casa Grande.AD\01H1GALL.PLT" 31
   PLOTFILE 24 ALL 1ST "Fontana_Sierra Casa Grande.AD\24H1GALL.PLT" 32
   PLOTFILE ANNUAL ALL "Fontana_Sierra Casa Grande.AD\AN00GALL.PLT" 33
   SUMMFILE "Fontana_Sierra Casa Grande.sum"
OU FINISHED
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** Project Parameters
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** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     11
** ZONEINX  0
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** AERMOD Input Produced by:
** AERMOD View Ver. 9.8.3
** Lakes Environmental Software Inc.
** Date: 5/27/2020
** File: C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande_rev\Fontana_Sierra Casa
Grande.ADI
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**************************************
** AERMOD Control Pathway
**************************************
**
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CO STARTING
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   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Fontana_Sierra Casa Grande.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
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**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Sierra Avenue - I-15 to Casa Grande
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 0.0000151
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 9
** 459759.868, 3782350.978, 610.40, 3.70, 2.33
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** 459784.032, 3782293.357, 605.69, 3.70, 2.33
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** 459795.184, 3782048.933, 599.22, 3.70, 2.33
** 459799.831, 3781750.605, 593.62, 3.70, 2.33
** 459798.902, 3781556.366, 587.51, 3.70, 2.33
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** 459798.397, 3779743.913, 531.36, 3.70, 2.33
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   LOCATION L0004174     VOLUME   459764.702 3782339.451 609.08
   LOCATION L0004175     VOLUME   459766.636 3782334.840 608.73
   LOCATION L0004176     VOLUME   459768.569 3782330.229 608.36
   LOCATION L0004177     VOLUME   459770.503 3782325.618 607.93
   LOCATION L0004178     VOLUME   459772.437 3782321.007 607.46
   LOCATION L0004179     VOLUME   459774.370 3782316.396 607.10
   LOCATION L0004180     VOLUME   459776.304 3782311.785 606.82
   LOCATION L0004181     VOLUME   459778.238 3782307.174 606.56
   LOCATION L0004182     VOLUME   459780.171 3782302.563 606.37
   LOCATION L0004183     VOLUME   459782.105 3782297.952 606.18
   LOCATION L0004184     VOLUME   459784.035 3782293.340 605.98
   LOCATION L0004185     VOLUME   459784.935 3782288.422 605.77
   LOCATION L0004186     VOLUME   459785.834 3782283.503 605.56
   LOCATION L0004187     VOLUME   459786.734 3782278.585 605.35
   LOCATION L0004188     VOLUME   459787.634 3782273.667 605.16
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   LOCATION L0004190     VOLUME   459789.433 3782263.830 604.79
   LOCATION L0004191     VOLUME   459790.333 3782258.911 604.60
   LOCATION L0004192     VOLUME   459791.233 3782253.993 604.41
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   LOCATION L0004195     VOLUME   459793.932 3782239.238 603.88
   LOCATION L0004196     VOLUME   459794.831 3782234.320 603.72
   LOCATION L0004197     VOLUME   459795.731 3782229.401 603.55
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   LOCATION L0004202     VOLUME   459797.972 3782204.604 602.78
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LOCATION L0004226     VOLUME   459797.096 3782084.628 600.66
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LOCATION L0004233     VOLUME   459795.224 3782049.678 599.84
LOCATION L0004234     VOLUME   459795.250 3782044.680 599.70
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LOCATION L0004246     VOLUME   459796.185 3781984.687 598.01
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LOCATION L0004266     VOLUME   459797.742 3781884.699 596.26
LOCATION L0004267     VOLUME   459797.820 3781879.700 596.24
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LOCATION L0004270     VOLUME   459798.054 3781864.701 596.08
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LOCATION L0004321     VOLUME   459799.157 3781609.717 589.10
LOCATION L0004322     VOLUME   459799.133 3781604.717 588.93
LOCATION L0004323     VOLUME   459799.109 3781599.717 588.77
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LOCATION L0004642     VOLUME   459800.410 3780004.776 538.66
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LOCATION L0004643     VOLUME   459800.371 3779999.776 538.51
LOCATION L0004644     VOLUME   459800.333 3779994.776 538.37
LOCATION L0004645     VOLUME   459800.294 3779989.776 538.22
LOCATION L0004646     VOLUME   459800.255 3779984.776 538.08
LOCATION L0004647     VOLUME   459800.217 3779979.776 537.93
LOCATION L0004648     VOLUME   459800.178 3779974.777 537.79
LOCATION L0004649     VOLUME   459800.140 3779969.777 537.64
LOCATION L0004650     VOLUME   459800.101 3779964.777 537.50
LOCATION L0004651     VOLUME   459800.063 3779959.777 537.36
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LOCATION L0004653     VOLUME   459799.985 3779949.777 537.08
LOCATION L0004654     VOLUME   459799.947 3779944.777 536.93
LOCATION L0004655     VOLUME   459799.908 3779939.778 536.79
LOCATION L0004656     VOLUME   459799.870 3779934.778 536.65
LOCATION L0004657     VOLUME   459799.831 3779929.778 536.51
LOCATION L0004658     VOLUME   459799.793 3779924.778 536.37
LOCATION L0004659     VOLUME   459799.754 3779919.778 536.23
LOCATION L0004660     VOLUME   459799.715 3779914.778 536.09
LOCATION L0004661     VOLUME   459799.677 3779909.778 535.95
LOCATION L0004662     VOLUME   459799.638 3779904.779 535.81
LOCATION L0004663     VOLUME   459799.600 3779899.779 535.67
LOCATION L0004664     VOLUME   459799.561 3779894.779 535.53
LOCATION L0004665     VOLUME   459799.522 3779889.779 535.39
LOCATION L0004666     VOLUME   459799.484 3779884.779 535.26
LOCATION L0004667     VOLUME   459799.445 3779879.779 535.12
LOCATION L0004668     VOLUME   459799.407 3779874.780 534.98
LOCATION L0004669     VOLUME   459799.368 3779869.780 534.83
LOCATION L0004670     VOLUME   459799.330 3779864.780 534.67
LOCATION L0004671     VOLUME   459799.291 3779859.780 534.52
LOCATION L0004672     VOLUME   459799.252 3779854.780 534.36
LOCATION L0004673     VOLUME   459799.214 3779849.780 534.21
LOCATION L0004674     VOLUME   459799.175 3779844.780 534.05
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LOCATION L0004676     VOLUME   459799.098 3779834.781 533.74
LOCATION L0004677     VOLUME   459799.060 3779829.781 533.59
LOCATION L0004678     VOLUME   459799.021 3779824.781 533.43
LOCATION L0004679     VOLUME   459798.982 3779819.781 533.28
LOCATION L0004680     VOLUME   459798.944 3779814.781 533.13
LOCATION L0004681     VOLUME   459798.905 3779809.781 532.99
LOCATION L0004682     VOLUME   459798.867 3779804.782 532.86
LOCATION L0004683     VOLUME   459798.828 3779799.782 532.73
LOCATION L0004684     VOLUME   459798.789 3779794.782 532.60
LOCATION L0004685     VOLUME   459798.751 3779789.782 532.47
LOCATION L0004686     VOLUME   459798.712 3779784.782 532.34
LOCATION L0004687     VOLUME   459798.674 3779779.782 532.22
LOCATION L0004688     VOLUME   459798.635 3779774.782 532.09
LOCATION L0004689     VOLUME   459798.597 3779769.783 531.97
LOCATION L0004690     VOLUME   459798.558 3779764.783 531.85
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   LOCATION L0004691     VOLUME   459798.519 3779759.783 531.72
   LOCATION L0004692     VOLUME   459798.481 3779754.783 531.60
   LOCATION L0004693     VOLUME   459798.442 3779749.783 531.47
   LOCATION L0004694     VOLUME   459798.404 3779744.783 531.34
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Sierra Avenue - SR-210 to Casa Grande
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 0.000123
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 4
** 459795.859, 3777387.468, 465.79, 3.70, 2.33
** 459791.705, 3777552.074, 473.30, 3.70, 2.33
** 459798.663, 3778918.242, 508.32, 3.70, 2.33
** 459798.334, 3779742.591, 531.33, 3.70, 2.33
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   LOCATION L0004700     VOLUME   459795.165 3777414.959 470.90
   LOCATION L0004701     VOLUME   459795.039 3777419.958 471.00
   LOCATION L0004702     VOLUME   459794.913 3777424.956 471.10
   LOCATION L0004703     VOLUME   459794.786 3777429.955 471.20
   LOCATION L0004704     VOLUME   459794.660 3777434.953 471.30
   LOCATION L0004705     VOLUME   459794.534 3777439.951 471.40
   LOCATION L0004706     VOLUME   459794.408 3777444.950 471.46
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   LOCATION L0004715     VOLUME   459793.273 3777489.935 471.88
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   LOCATION L0004717     VOLUME   459793.020 3777499.932 472.01
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   LOCATION L0004719     VOLUME   459792.768 3777509.929 472.20
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   LOCATION L0004721     VOLUME   459792.516 3777519.926 472.42
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LOCATION L0004724     VOLUME   459792.137 3777534.921 472.76
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LOCATION L0004731     VOLUME   459791.795 3777569.915 473.63
LOCATION L0004732     VOLUME   459791.821 3777574.915 473.75
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LOCATION L0004737     VOLUME   459791.948 3777599.915 474.38
LOCATION L0004738     VOLUME   459791.974 3777604.915 474.50
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LOCATION L0004769     VOLUME   459792.763 3777759.913 478.25
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LOCATION L0004913     VOLUME   459796.430 3778479.904 496.65
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LOCATION L0004949     VOLUME   459797.347 3778659.901 501.63
LOCATION L0004950     VOLUME   459797.373 3778664.901 501.74
LOCATION L0004951     VOLUME   459797.398 3778669.901 501.86
LOCATION L0004952     VOLUME   459797.424 3778674.901 501.98
LOCATION L0004953     VOLUME   459797.449 3778679.901 502.12
LOCATION L0004954     VOLUME   459797.475 3778684.901 502.26
LOCATION L0004955     VOLUME   459797.500 3778689.901 502.39
LOCATION L0004956     VOLUME   459797.526 3778694.901 502.53
LOCATION L0004957     VOLUME   459797.551 3778699.901 502.67
LOCATION L0004958     VOLUME   459797.577 3778704.901 502.81
LOCATION L0004959     VOLUME   459797.602 3778709.901 502.96
LOCATION L0004960     VOLUME   459797.627 3778714.901 503.10
LOCATION L0004961     VOLUME   459797.653 3778719.901 503.25
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LOCATION L0004962     VOLUME   459797.678 3778724.900 503.39
LOCATION L0004963     VOLUME   459797.704 3778729.900 503.54
LOCATION L0004964     VOLUME   459797.729 3778734.900 503.69
LOCATION L0004965     VOLUME   459797.755 3778739.900 503.81
LOCATION L0004966     VOLUME   459797.780 3778744.900 503.94
LOCATION L0004967     VOLUME   459797.806 3778749.900 504.07
LOCATION L0004968     VOLUME   459797.831 3778754.900 504.20
LOCATION L0004969     VOLUME   459797.857 3778759.900 504.32
LOCATION L0004970     VOLUME   459797.882 3778764.900 504.45
LOCATION L0004971     VOLUME   459797.908 3778769.900 504.58
LOCATION L0004972     VOLUME   459797.933 3778774.900 504.70
LOCATION L0004973     VOLUME   459797.959 3778779.900 504.82
LOCATION L0004974     VOLUME   459797.984 3778784.900 504.94
LOCATION L0004975     VOLUME   459798.009 3778789.900 505.07
LOCATION L0004976     VOLUME   459798.035 3778794.900 505.19
LOCATION L0004977     VOLUME   459798.060 3778799.899 505.32
LOCATION L0004978     VOLUME   459798.086 3778804.899 505.45
LOCATION L0004979     VOLUME   459798.111 3778809.899 505.58
LOCATION L0004980     VOLUME   459798.137 3778814.899 505.72
LOCATION L0004981     VOLUME   459798.162 3778819.899 505.85
LOCATION L0004982     VOLUME   459798.188 3778824.899 505.98
LOCATION L0004983     VOLUME   459798.213 3778829.899 506.12
LOCATION L0004984     VOLUME   459798.239 3778834.899 506.25
LOCATION L0004985     VOLUME   459798.264 3778839.899 506.38
LOCATION L0004986     VOLUME   459798.290 3778844.899 506.52
LOCATION L0004987     VOLUME   459798.315 3778849.899 506.65
LOCATION L0004988     VOLUME   459798.341 3778854.899 506.78
LOCATION L0004989     VOLUME   459798.366 3778859.899 506.92
LOCATION L0004990     VOLUME   459798.391 3778864.899 507.05
LOCATION L0004991     VOLUME   459798.417 3778869.899 507.18
LOCATION L0004992     VOLUME   459798.442 3778874.898 507.32
LOCATION L0004993     VOLUME   459798.468 3778879.898 507.45
LOCATION L0004994     VOLUME   459798.493 3778884.898 507.58
LOCATION L0004995     VOLUME   459798.519 3778889.898 507.71
LOCATION L0004996     VOLUME   459798.544 3778894.898 507.82
LOCATION L0004997     VOLUME   459798.570 3778899.898 507.93
LOCATION L0004998     VOLUME   459798.595 3778904.898 508.04
LOCATION L0004999     VOLUME   459798.621 3778909.898 508.15
LOCATION L0005000     VOLUME   459798.646 3778914.898 508.25
LOCATION L0005001     VOLUME   459798.663 3778919.898 508.36
LOCATION L0005002     VOLUME   459798.661 3778924.898 508.50
LOCATION L0005003     VOLUME   459798.659 3778929.898 508.63
LOCATION L0005004     VOLUME   459798.657 3778934.898 508.77
LOCATION L0005005     VOLUME   459798.655 3778939.898 508.91
LOCATION L0005006     VOLUME   459798.653 3778944.898 509.04
LOCATION L0005007     VOLUME   459798.651 3778949.898 509.18
LOCATION L0005008     VOLUME   459798.649 3778954.898 509.32
LOCATION L0005009     VOLUME   459798.647 3778959.898 509.46
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LOCATION L0005010     VOLUME   459798.645 3778964.898 509.60
LOCATION L0005011     VOLUME   459798.643 3778969.898 509.74
LOCATION L0005012     VOLUME   459798.641 3778974.898 509.87
LOCATION L0005013     VOLUME   459798.639 3778979.898 510.01
LOCATION L0005014     VOLUME   459798.637 3778984.898 510.16
LOCATION L0005015     VOLUME   459798.635 3778989.898 510.30
LOCATION L0005016     VOLUME   459798.633 3778994.898 510.44
LOCATION L0005017     VOLUME   459798.631 3778999.898 510.59
LOCATION L0005018     VOLUME   459798.629 3779004.898 510.73
LOCATION L0005019     VOLUME   459798.627 3779009.898 510.87
LOCATION L0005020     VOLUME   459798.625 3779014.898 511.02
LOCATION L0005021     VOLUME   459798.623 3779019.898 511.16
LOCATION L0005022     VOLUME   459798.621 3779024.898 511.31
LOCATION L0005023     VOLUME   459798.619 3779029.898 511.45
LOCATION L0005024     VOLUME   459798.617 3779034.898 511.59
LOCATION L0005025     VOLUME   459798.615 3779039.898 511.74
LOCATION L0005026     VOLUME   459798.613 3779044.898 511.89
LOCATION L0005027     VOLUME   459798.611 3779049.898 512.04
LOCATION L0005028     VOLUME   459798.609 3779054.898 512.20
LOCATION L0005029     VOLUME   459798.607 3779059.898 512.35
LOCATION L0005030     VOLUME   459798.605 3779064.898 512.51
LOCATION L0005031     VOLUME   459798.603 3779069.898 512.66
LOCATION L0005032     VOLUME   459798.601 3779074.898 512.81
LOCATION L0005033     VOLUME   459798.599 3779079.898 512.94
LOCATION L0005034     VOLUME   459798.597 3779084.898 513.06
LOCATION L0005035     VOLUME   459798.595 3779089.898 513.19
LOCATION L0005036     VOLUME   459798.593 3779094.898 513.32
LOCATION L0005037     VOLUME   459798.591 3779099.898 513.45
LOCATION L0005038     VOLUME   459798.589 3779104.898 513.57
LOCATION L0005039     VOLUME   459798.587 3779109.898 513.68
LOCATION L0005040     VOLUME   459798.585 3779114.898 513.79
LOCATION L0005041     VOLUME   459798.583 3779119.898 513.90
LOCATION L0005042     VOLUME   459798.581 3779124.898 514.01
LOCATION L0005043     VOLUME   459798.579 3779129.898 514.12
LOCATION L0005044     VOLUME   459798.577 3779134.898 514.23
LOCATION L0005045     VOLUME   459798.575 3779139.898 514.34
LOCATION L0005046     VOLUME   459798.573 3779144.898 514.46
LOCATION L0005047     VOLUME   459798.571 3779149.898 514.58
LOCATION L0005048     VOLUME   459798.569 3779154.898 514.70
LOCATION L0005049     VOLUME   459798.567 3779159.898 514.81
LOCATION L0005050     VOLUME   459798.565 3779164.898 514.93
LOCATION L0005051     VOLUME   459798.563 3779169.898 515.05
LOCATION L0005052     VOLUME   459798.561 3779174.898 515.18
LOCATION L0005053     VOLUME   459798.559 3779179.898 515.30
LOCATION L0005054     VOLUME   459798.557 3779184.898 515.43
LOCATION L0005055     VOLUME   459798.555 3779189.898 515.55
LOCATION L0005056     VOLUME   459798.553 3779194.898 515.68
LOCATION L0005057     VOLUME   459798.551 3779199.898 515.80
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LOCATION L0005058     VOLUME   459798.549 3779204.898 515.93
LOCATION L0005059     VOLUME   459798.547 3779209.898 516.06
LOCATION L0005060     VOLUME   459798.545 3779214.898 516.19
LOCATION L0005061     VOLUME   459798.543 3779219.898 516.32
LOCATION L0005062     VOLUME   459798.541 3779224.898 516.45
LOCATION L0005063     VOLUME   459798.539 3779229.898 516.58
LOCATION L0005064     VOLUME   459798.537 3779234.898 516.71
LOCATION L0005065     VOLUME   459798.535 3779239.898 516.84
LOCATION L0005066     VOLUME   459798.533 3779244.898 516.97
LOCATION L0005067     VOLUME   459798.531 3779249.898 517.10
LOCATION L0005068     VOLUME   459798.529 3779254.898 517.23
LOCATION L0005069     VOLUME   459798.527 3779259.898 517.36
LOCATION L0005070     VOLUME   459798.525 3779264.898 517.50
LOCATION L0005071     VOLUME   459798.523 3779269.898 517.64
LOCATION L0005072     VOLUME   459798.521 3779274.898 517.78
LOCATION L0005073     VOLUME   459798.519 3779279.898 517.92
LOCATION L0005074     VOLUME   459798.517 3779284.898 518.06
LOCATION L0005075     VOLUME   459798.515 3779289.898 518.20
LOCATION L0005076     VOLUME   459798.513 3779294.898 518.35
LOCATION L0005077     VOLUME   459798.511 3779299.898 518.50
LOCATION L0005078     VOLUME   459798.509 3779304.898 518.66
LOCATION L0005079     VOLUME   459798.507 3779309.898 518.81
LOCATION L0005080     VOLUME   459798.505 3779314.898 518.97
LOCATION L0005081     VOLUME   459798.503 3779319.898 519.12
LOCATION L0005082     VOLUME   459798.501 3779324.898 519.26
LOCATION L0005083     VOLUME   459798.499 3779329.898 519.41
LOCATION L0005084     VOLUME   459798.497 3779334.898 519.55
LOCATION L0005085     VOLUME   459798.495 3779339.898 519.70
LOCATION L0005086     VOLUME   459798.493 3779344.898 519.84
LOCATION L0005087     VOLUME   459798.491 3779349.898 519.99
LOCATION L0005088     VOLUME   459798.489 3779354.898 520.11
LOCATION L0005089     VOLUME   459798.487 3779359.898 520.22
LOCATION L0005090     VOLUME   459798.485 3779364.898 520.33
LOCATION L0005091     VOLUME   459798.483 3779369.898 520.44
LOCATION L0005092     VOLUME   459798.481 3779374.898 520.56
LOCATION L0005093     VOLUME   459798.479 3779379.898 520.67
LOCATION L0005094     VOLUME   459798.477 3779384.898 520.79
LOCATION L0005095     VOLUME   459798.475 3779389.898 520.93
LOCATION L0005096     VOLUME   459798.473 3779394.898 521.06
LOCATION L0005097     VOLUME   459798.471 3779399.898 521.19
LOCATION L0005098     VOLUME   459798.469 3779404.898 521.32
LOCATION L0005099     VOLUME   459798.467 3779409.898 521.45
LOCATION L0005100     VOLUME   459798.465 3779414.898 521.59
LOCATION L0005101     VOLUME   459798.463 3779419.898 521.72
LOCATION L0005102     VOLUME   459798.461 3779424.898 521.86
LOCATION L0005103     VOLUME   459798.459 3779429.898 521.99
LOCATION L0005104     VOLUME   459798.457 3779434.898 522.13
LOCATION L0005105     VOLUME   459798.455 3779439.898 522.27
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LOCATION L0005106     VOLUME   459798.453 3779444.898 522.41
LOCATION L0005107     VOLUME   459798.451 3779449.898 522.55
LOCATION L0005108     VOLUME   459798.449 3779454.898 522.70
LOCATION L0005109     VOLUME   459798.447 3779459.898 522.84
LOCATION L0005110     VOLUME   459798.445 3779464.898 522.99
LOCATION L0005111     VOLUME   459798.443 3779469.898 523.13
LOCATION L0005112     VOLUME   459798.441 3779474.898 523.28
LOCATION L0005113     VOLUME   459798.439 3779479.898 523.42
LOCATION L0005114     VOLUME   459798.437 3779484.898 523.55
LOCATION L0005115     VOLUME   459798.435 3779489.898 523.69
LOCATION L0005116     VOLUME   459798.433 3779494.898 523.83
LOCATION L0005117     VOLUME   459798.431 3779499.898 523.97
LOCATION L0005118     VOLUME   459798.429 3779504.898 524.11
LOCATION L0005119     VOLUME   459798.427 3779509.898 524.25
LOCATION L0005120     VOLUME   459798.425 3779514.898 524.39
LOCATION L0005121     VOLUME   459798.423 3779519.898 524.53
LOCATION L0005122     VOLUME   459798.421 3779524.898 524.67
LOCATION L0005123     VOLUME   459798.419 3779529.898 524.81
LOCATION L0005124     VOLUME   459798.417 3779534.898 524.95
LOCATION L0005125     VOLUME   459798.415 3779539.898 525.09
LOCATION L0005126     VOLUME   459798.413 3779544.898 525.24
LOCATION L0005127     VOLUME   459798.411 3779549.898 525.38
LOCATION L0005128     VOLUME   459798.409 3779554.898 525.53
LOCATION L0005129     VOLUME   459798.407 3779559.898 525.67
LOCATION L0005130     VOLUME   459798.405 3779564.898 525.82
LOCATION L0005131     VOLUME   459798.403 3779569.898 525.96
LOCATION L0005132     VOLUME   459798.401 3779574.898 526.11
LOCATION L0005133     VOLUME   459798.399 3779579.898 526.25
LOCATION L0005134     VOLUME   459798.397 3779584.898 526.40
LOCATION L0005135     VOLUME   459798.395 3779589.898 526.54
LOCATION L0005136     VOLUME   459798.393 3779594.898 526.68
LOCATION L0005137     VOLUME   459798.391 3779599.898 526.83
LOCATION L0005138     VOLUME   459798.389 3779604.898 526.98
LOCATION L0005139     VOLUME   459798.387 3779609.898 527.13
LOCATION L0005140     VOLUME   459798.385 3779614.898 527.29
LOCATION L0005141     VOLUME   459798.383 3779619.898 527.44
LOCATION L0005142     VOLUME   459798.381 3779624.898 527.59
LOCATION L0005143     VOLUME   459798.379 3779629.898 527.74
LOCATION L0005144     VOLUME   459798.377 3779634.898 527.90
LOCATION L0005145     VOLUME   459798.375 3779639.898 528.06
LOCATION L0005146     VOLUME   459798.373 3779644.898 528.22
LOCATION L0005147     VOLUME   459798.371 3779649.898 528.38
LOCATION L0005148     VOLUME   459798.369 3779654.898 528.54
LOCATION L0005149     VOLUME   459798.367 3779659.898 528.70
LOCATION L0005150     VOLUME   459798.365 3779664.898 528.86
LOCATION L0005151     VOLUME   459798.363 3779669.898 529.02
LOCATION L0005152     VOLUME   459798.361 3779674.898 529.19
LOCATION L0005153     VOLUME   459798.359 3779679.898 529.35
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   LOCATION L0005154     VOLUME   459798.357 3779684.898 529.52
   LOCATION L0005155     VOLUME   459798.355 3779689.898 529.68
   LOCATION L0005156     VOLUME   459798.353 3779694.898 529.84
   LOCATION L0005157     VOLUME   459798.351 3779699.898 530.01
   LOCATION L0005158     VOLUME   459798.349 3779704.898 530.17
   LOCATION L0005159     VOLUME   459798.347 3779709.898 530.33
   LOCATION L0005160     VOLUME   459798.345 3779714.898 530.49
   LOCATION L0005161     VOLUME   459798.343 3779719.898 530.66
   LOCATION L0005162     VOLUME   459798.341 3779724.898 530.80
   LOCATION L0005163     VOLUME   459798.339 3779729.898 530.93
   LOCATION L0005164     VOLUME   459798.337 3779734.898 531.07
   LOCATION L0005165     VOLUME   459798.335 3779739.898 531.20
** End of LINE VOLUME Source ID = SLINE2
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Casa Grande - to W Driveway
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 6.82E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459801.241, 3779743.383, 531.30, 3.70, 2.33
** 459898.250, 3779742.782, 531.23, 3.70, 2.33
** ----------------------------------------------------------------------
   LOCATION L0005166     VOLUME   459803.741 3779743.367 531.29
   LOCATION L0005167     VOLUME   459808.741 3779743.337 531.29
   LOCATION L0005168     VOLUME   459813.741 3779743.306 531.28
   LOCATION L0005169     VOLUME   459818.741 3779743.275 531.31
   LOCATION L0005170     VOLUME   459823.741 3779743.244 531.34
   LOCATION L0005171     VOLUME   459828.741 3779743.213 531.37
   LOCATION L0005172     VOLUME   459833.741 3779743.182 531.40
   LOCATION L0005173     VOLUME   459838.741 3779743.151 531.43
   LOCATION L0005174     VOLUME   459843.741 3779743.120 531.39
   LOCATION L0005175     VOLUME   459848.741 3779743.089 531.35
   LOCATION L0005176     VOLUME   459853.740 3779743.058 531.31
   LOCATION L0005177     VOLUME   459858.740 3779743.027 531.27
   LOCATION L0005178     VOLUME   459863.740 3779742.996 531.23
   LOCATION L0005179     VOLUME   459868.740 3779742.965 531.21
   LOCATION L0005180     VOLUME   459873.740 3779742.934 531.20
   LOCATION L0005181     VOLUME   459878.740 3779742.903 531.19
   LOCATION L0005182     VOLUME   459883.740 3779742.872 531.17
   LOCATION L0005183     VOLUME   459888.740 3779742.841 531.16
   LOCATION L0005184     VOLUME   459893.740 3779742.810 531.18
** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Casa Grande - W Driveway to E Driveway
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 6.88E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459895.547, 3779743.108, 531.26, 3.70, 2.33
** 460091.098, 3779742.189, 530.62, 3.70, 2.33
** ----------------------------------------------------------------------
   LOCATION L0005185     VOLUME   459898.047 3779743.096 531.21
   LOCATION L0005186     VOLUME   459903.047 3779743.073 531.24
   LOCATION L0005187     VOLUME   459908.046 3779743.049 531.27
   LOCATION L0005188     VOLUME   459913.046 3779743.026 531.30
   LOCATION L0005189     VOLUME   459918.046 3779743.002 531.32
   LOCATION L0005190     VOLUME   459923.046 3779742.979 531.33
   LOCATION L0005191     VOLUME   459928.046 3779742.955 531.33
   LOCATION L0005192     VOLUME   459933.046 3779742.932 531.34
   LOCATION L0005193     VOLUME   459938.046 3779742.908 531.35
   LOCATION L0005194     VOLUME   459943.046 3779742.885 531.36
   LOCATION L0005195     VOLUME   459948.046 3779742.861 531.37
   LOCATION L0005196     VOLUME   459953.046 3779742.838 531.38
   LOCATION L0005197     VOLUME   459958.046 3779742.814 531.39
   LOCATION L0005198     VOLUME   459963.046 3779742.791 531.40
   LOCATION L0005199     VOLUME   459968.046 3779742.767 531.42
   LOCATION L0005200     VOLUME   459973.046 3779742.744 531.42
   LOCATION L0005201     VOLUME   459978.046 3779742.720 531.43
   LOCATION L0005202     VOLUME   459983.046 3779742.697 531.44
   LOCATION L0005203     VOLUME   459988.046 3779742.673 531.44
   LOCATION L0005204     VOLUME   459993.046 3779742.650 531.45
   LOCATION L0005205     VOLUME   459998.045 3779742.626 531.43
   LOCATION L0005206     VOLUME   460003.045 3779742.603 531.42
   LOCATION L0005207     VOLUME   460008.045 3779742.579 531.41
   LOCATION L0005208     VOLUME   460013.045 3779742.556 531.39
   LOCATION L0005209     VOLUME   460018.045 3779742.532 531.38
   LOCATION L0005210     VOLUME   460023.045 3779742.509 531.35
   LOCATION L0005211     VOLUME   460028.045 3779742.485 531.33
   LOCATION L0005212     VOLUME   460033.045 3779742.462 531.30
   LOCATION L0005213     VOLUME   460038.045 3779742.438 531.27
   LOCATION L0005214     VOLUME   460043.045 3779742.415 531.25
   LOCATION L0005215     VOLUME   460048.045 3779742.391 531.19
   LOCATION L0005216     VOLUME   460053.045 3779742.368 531.14
   LOCATION L0005217     VOLUME   460058.045 3779742.345 531.08
   LOCATION L0005218     VOLUME   460063.045 3779742.321 531.02
   LOCATION L0005219     VOLUME   460068.045 3779742.298 530.96
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   LOCATION L0005220     VOLUME   460073.045 3779742.274 530.88
   LOCATION L0005221     VOLUME   460078.045 3779742.251 530.80
   LOCATION L0005222     VOLUME   460083.045 3779742.227 530.71
   LOCATION L0005223     VOLUME   460088.044 3779742.204 530.63
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC W Driveway Site Entrance
** PREFIX
** Length of Side = 3.60
** Configuration = Adjacent
** Emission Rate = 1.29E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459893.712, 3779746.170, 531.35, 3.70, 1.67
** 459893.731, 3779794.306, 532.16, 3.70, 1.67
** ----------------------------------------------------------------------
   LOCATION L0005224     VOLUME   459893.713 3779747.970 531.33
   LOCATION L0005225     VOLUME   459893.714 3779751.570 531.43
   LOCATION L0005226     VOLUME   459893.715 3779755.170 531.52
   LOCATION L0005227     VOLUME   459893.717 3779758.770 531.61
   LOCATION L0005228     VOLUME   459893.718 3779762.370 531.70
   LOCATION L0005229     VOLUME   459893.720 3779765.970 531.79
   LOCATION L0005230     VOLUME   459893.721 3779769.570 531.88
   LOCATION L0005231     VOLUME   459893.722 3779773.170 531.97
   LOCATION L0005232     VOLUME   459893.724 3779776.770 532.06
   LOCATION L0005233     VOLUME   459893.725 3779780.370 532.15
   LOCATION L0005234     VOLUME   459893.727 3779783.970 532.24
   LOCATION L0005235     VOLUME   459893.728 3779787.570 532.34
   LOCATION L0005236     VOLUME   459893.729 3779791.170 532.43
** End of LINE VOLUME Source ID = SLINE5
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC E Driveway Site Entrance
** PREFIX
** Length of Side = 3.60
** Configuration = Adjacent
** Emission Rate = 2.17E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 7
** 460090.758, 3779744.694, 530.67, 3.70, 1.67
** 460090.095, 3779762.221, 530.94, 3.70, 1.67
** 460086.997, 3779781.927, 531.44, 3.70, 1.67
** 460077.401, 3779792.244, 531.53, 3.70, 1.67
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** 460067.742, 3779796.355, 531.63, 3.70, 1.67
** 460060.925, 3779797.620, 531.67, 3.70, 1.67
** 460048.929, 3779798.445, 531.87, 3.70, 1.67
** ----------------------------------------------------------------------
   LOCATION L0005237     VOLUME   460090.690 3779746.493 530.70
   LOCATION L0005238     VOLUME   460090.554 3779750.091 530.79
   LOCATION L0005239     VOLUME   460090.418 3779753.688 530.87
   LOCATION L0005240     VOLUME   460090.282 3779757.285 530.95
   LOCATION L0005241     VOLUME   460090.146 3779760.883 531.03
   LOCATION L0005242     VOLUME   460089.744 3779764.454 531.11
   LOCATION L0005243     VOLUME   460089.185 3779768.011 531.20
   LOCATION L0005244     VOLUME   460088.626 3779771.567 531.28
   LOCATION L0005245     VOLUME   460088.067 3779775.123 531.36
   LOCATION L0005246     VOLUME   460087.507 3779778.680 531.44
   LOCATION L0005247     VOLUME   460086.784 3779782.156 531.53
   LOCATION L0005248     VOLUME   460084.332 3779784.792 531.62
   LOCATION L0005249     VOLUME   460081.880 3779787.428 531.70
   LOCATION L0005250     VOLUME   460079.428 3779790.064 531.79
   LOCATION L0005251     VOLUME   460076.828 3779792.488 531.86
   LOCATION L0005252     VOLUME   460073.515 3779793.898 531.92
   LOCATION L0005253     VOLUME   460070.203 3779795.307 531.96
   LOCATION L0005254     VOLUME   460066.832 3779796.524 532.02
   LOCATION L0005255     VOLUME   460063.292 3779797.180 532.07
   LOCATION L0005256     VOLUME   460059.735 3779797.701 532.12
   LOCATION L0005257     VOLUME   460056.144 3779797.949 532.16
   LOCATION L0005258     VOLUME   460052.552 3779798.196 532.20
   LOCATION L0005259     VOLUME   460048.961 3779798.443 532.24
** End of LINE VOLUME Source ID = SLINE6
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC On-SIte Idling
** PREFIX
** Length of Side = 3.60
** Configuration = Adjacent
** Emission Rate = 8.0E-06
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 2
** 459885.360, 3779829.471, 533.66, 3.70, 1.67
** 460051.862, 3779828.472, 533.05, 3.70, 1.67
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   LOCATION L0005260     VOLUME   459887.160 3779829.461 533.51
   LOCATION L0005261     VOLUME   459890.760 3779829.439 533.52
   LOCATION L0005262     VOLUME   459894.360 3779829.417 533.55
   LOCATION L0005263     VOLUME   459897.960 3779829.396 533.58
   LOCATION L0005264     VOLUME   459901.560 3779829.374 533.61
   LOCATION L0005265     VOLUME   459905.160 3779829.352 533.65
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   LOCATION L0005266     VOLUME   459908.760 3779829.331 533.68
   LOCATION L0005267     VOLUME   459912.360 3779829.309 533.71
   LOCATION L0005268     VOLUME   459915.960 3779829.288 533.74
   LOCATION L0005269     VOLUME   459919.560 3779829.266 533.74
   LOCATION L0005270     VOLUME   459923.159 3779829.244 533.74
   LOCATION L0005271     VOLUME   459926.759 3779829.223 533.74
   LOCATION L0005272     VOLUME   459930.359 3779829.201 533.74
   LOCATION L0005273     VOLUME   459933.959 3779829.180 533.74
   LOCATION L0005274     VOLUME   459937.559 3779829.158 533.74
   LOCATION L0005275     VOLUME   459941.159 3779829.136 533.74
   LOCATION L0005276     VOLUME   459944.759 3779829.115 533.73
   LOCATION L0005277     VOLUME   459948.359 3779829.093 533.73
   LOCATION L0005278     VOLUME   459951.959 3779829.071 533.72
   LOCATION L0005279     VOLUME   459955.559 3779829.050 533.71
   LOCATION L0005280     VOLUME   459959.159 3779829.028 533.71
   LOCATION L0005281     VOLUME   459962.759 3779829.007 533.70
   LOCATION L0005282     VOLUME   459966.359 3779828.985 533.70
   LOCATION L0005283     VOLUME   459969.959 3779828.963 533.69
   LOCATION L0005284     VOLUME   459973.559 3779828.942 533.68
   LOCATION L0005285     VOLUME   459977.159 3779828.920 533.67
   LOCATION L0005286     VOLUME   459980.758 3779828.899 533.66
   LOCATION L0005287     VOLUME   459984.358 3779828.877 533.66
   LOCATION L0005288     VOLUME   459987.958 3779828.855 533.65
   LOCATION L0005289     VOLUME   459991.558 3779828.834 533.64
   LOCATION L0005290     VOLUME   459995.158 3779828.812 533.62
   LOCATION L0005291     VOLUME   459998.758 3779828.790 533.58
   LOCATION L0005292     VOLUME   460002.358 3779828.769 533.55
   LOCATION L0005293     VOLUME   460005.958 3779828.747 533.52
   LOCATION L0005294     VOLUME   460009.558 3779828.726 533.48
   LOCATION L0005295     VOLUME   460013.158 3779828.704 533.45
   LOCATION L0005296     VOLUME   460016.758 3779828.682 533.42
   LOCATION L0005297     VOLUME   460020.358 3779828.661 533.37
   LOCATION L0005298     VOLUME   460023.958 3779828.639 533.30
   LOCATION L0005299     VOLUME   460027.558 3779828.618 533.24
   LOCATION L0005300     VOLUME   460031.158 3779828.596 533.17
   LOCATION L0005301     VOLUME   460034.757 3779828.574 533.11
   LOCATION L0005302     VOLUME   460038.357 3779828.553 533.04
   LOCATION L0005303     VOLUME   460041.957 3779828.531 532.97
   LOCATION L0005304     VOLUME   460045.557 3779828.510 532.93
   LOCATION L0005305     VOLUME   460049.157 3779828.488 532.91
** End of LINE VOLUME Source ID = SLINE7
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
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   SRCPARAM L0004173     0.00000002887      3.70      2.33      2.89
   SRCPARAM L0004174     0.00000002887      3.70      2.33      2.89
   SRCPARAM L0004175     0.00000002887      3.70      2.33      2.89
   SRCPARAM L0004176     0.00000002887      3.70      2.33      2.89
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SRCPARAM	L0004214	0.00000002887	3.70	2.33	2.89
SRCPARAM	L0004215	0.00000002887	3.70	2.33	2.89
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SRCPARAM	L0004224	0.00000002887	3.70	2.33	2.89

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SRCPARAM	L0004391	0.00000002887	3.70	2.33	2.89
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SRCPARAM L0004968     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004969     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004970     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004971     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004972     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0004976     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004977     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004978     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0004980     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004981     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004982     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004983     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004984     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004985     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004986     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004987     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004988     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004989     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004990     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0004992     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0004994     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004995     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004996     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004997     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004998     0.0000002611      3.70      2.33      2.89
SRCPARAM L0004999     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005000     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005001     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005002     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005003     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005004     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005005     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005006     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005007     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005008     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005011     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005014     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005015     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005016     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005017     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005029     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005030     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005035     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005036     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005045     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005046     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005047     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005048     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005049     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005051     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005052     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005053     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005054     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005055     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005056     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005057     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005058     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005059     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005061     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005062     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005063     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005064     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005065     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005066     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005067     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005071     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005072     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005073     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005074     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005075     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005080     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005081     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005082     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005083     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005084     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005085     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005086     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005090     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005091     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005092     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005093     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005102     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005103     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005109     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005111     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005112     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005113     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005114     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005115     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005120     0.0000002611      3.70      2.33      2.89
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SRCPARAM L0005129     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005130     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005131     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005132     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005133     0.0000002611      3.70      2.33      2.89
SRCPARAM L0005134     0.0000002611      3.70      2.33      2.89
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   SRCPARAM L0005135     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005136     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005137     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005138     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005139     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005140     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005141     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005142     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005143     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005144     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005145     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005146     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005147     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005148     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005149     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005150     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005151     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005152     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005153     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005154     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005155     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005156     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005157     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005158     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005159     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005160     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005161     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005162     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005163     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005164     0.0000002611      3.70      2.33      2.89
   SRCPARAM L0005165     0.0000002611      3.70      2.33      2.89
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** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0005166     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005167     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005168     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005169     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005170     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005171     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005172     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005173     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005174     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005175     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005176     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005177     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005178     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005179     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005180     0.0000003589      3.70      2.33      2.89
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   SRCPARAM L0005181     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005182     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005183     0.0000003589      3.70      2.33      2.89
   SRCPARAM L0005184     0.0000003589      3.70      2.33      2.89
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0005185     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005186     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005187     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005188     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005189     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005190     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005191     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005192     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005193     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005194     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005195     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005196     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005197     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005198     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005199     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005200     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005201     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005202     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005203     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005204     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005205     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005206     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005207     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005208     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005209     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005210     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005211     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005212     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005213     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005214     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005215     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005216     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005217     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005218     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005219     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005220     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005221     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005222     0.0000001764      3.70      2.33      2.89
   SRCPARAM L0005223     0.0000001764      3.70      2.33      2.89
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** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0005224     0.00000009923      3.70      1.67      2.89
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   SRCPARAM L0005225     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005226     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005227     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005228     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005229     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005230     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005231     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005232     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005233     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005234     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005235     0.00000009923      3.70      1.67      2.89
   SRCPARAM L0005236     0.00000009923      3.70      1.67      2.89
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0005237     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005238     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005239     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005240     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005241     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005242     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005243     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005244     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005245     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005246     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005247     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005248     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005249     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005250     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005251     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005252     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005253     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005254     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005255     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005256     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005257     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005258     0.00000009435      3.70      1.67      2.89
   SRCPARAM L0005259     0.00000009435      3.70      1.67      2.89
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0005260     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005261     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005262     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005263     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005264     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005265     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005266     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005267     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005268     0.0000001739      3.70      1.67      2.89
```

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   SRCPARAM L0005269     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005270     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005271     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005272     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005273     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005274     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005275     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005276     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005277     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005278     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005279     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005280     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005281     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005282     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005283     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005284     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005285     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005286     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005287     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005288     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005289     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005290     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005291     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005292     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005293     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005294     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005295     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005296     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005297     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005298     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005299     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005300     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005301     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005302     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005303     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005304     0.0000001739      3.70      1.67      2.89
   SRCPARAM L0005305     0.0000001739      3.70      1.67      2.89
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
************************************
** AERMOD Receptor Pathway
************************************
**
**
RE STARTING
```

```
   INCLUDED "Fontana_Sierra Casa Grande.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Fontana_Sierra Casa Grande.AD\01H1GALL.PLT" 31
   PLOTFILE 24 ALL 1ST "Fontana_Sierra Casa Grande.AD\24H1GALL.PLT" 32
   PLOTFILE ANNUAL ALL "Fontana_Sierra Casa Grande.AD\AN00GALL.PLT" 33
   SUMMFILE "Fontana_Sierra Casa Grande.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
```

 ME W186   2463   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187   2463   MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 ****
 *** SETUP Finishes Successfully ***
 ****

 *** AERMOD - VERSION 19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa ***   05/27/20
 *** AERMET - VERSION 16216 ***   ***
                        ***   10:59:05

                                   PAGE   1
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                             ***   MODEL SETUP OPTIONS SUMMARY
 ***
 -
- -

 **Model Is Setup For Calculation of Average CONCentration Values.

   -- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION. DRYDPLT = F
 **Model Uses NO WET DEPLETION. WETDPLT = F

 **Model Uses URBAN Dispersion Algorithm for the SBL for 1134 Source(s),
   for Total of   1 Urban Area(s):
   Urban Population =   2035210.0 ; Urban Roughness Length = 1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
         ADJ_U*   - Use ADJ_U* option for SBL in AERMET
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

```
 **The User Specified a Pollutant Type of:  PM_10

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:   1134 Source(s);       1 Source Group(s); and     710
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:   1134 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and
Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   367.00 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      4.1 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out
```

**Detailed Error/Message File: Fontana_Sierra Casa Grande.err

**File for Summary of Results: Fontana_Sierra Casa Grande.sum

*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 05/27/20
*** AERMET - VERSION 16216 *** *** 10:59:05

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0004172	0	0.28870E-07	459760.8	3782348.7	610.0	3.70	2.33	2.89	YES	
L0004173	0	0.28870E-07	459762.8	3782344.1	609.6	3.70	2.33	2.89	YES	
L0004174	0	0.28870E-07	459764.7	3782339.5	609.1	3.70	2.33	2.89	YES	
L0004175	0	0.28870E-07	459766.6	3782334.8	608.7	3.70	2.33	2.89	YES	
L0004176	0	0.28870E-07	459768.6	3782330.2	608.4	3.70	2.33	2.89	YES	
L0004177	0	0.28870E-07	459770.5	3782325.6	607.9	3.70	2.33	2.89	YES	
L0004178	0	0.28870E-07	459772.4	3782321.0	607.5	3.70	2.33	2.89	YES	
L0004179	0	0.28870E-07	459774.4	3782316.4	607.1	3.70	2.33	2.89	YES	
L0004180	0	0.28870E-07	459776.3	3782311.8	606.8	3.70	2.33	2.89	YES	
L0004181	0	0.28870E-07	459778.2	3782307.2	606.6	3.70	2.33	2.89	YES	
L0004182	0	0.28870E-07	459780.2	3782302.6	606.4	3.70	2.33	2.89	YES	
L0004183	0	0.28870E-07	459782.1	3782298.0	606.2	3.70	2.33			

2.89 YES							
L0004184	0	0.28870E-07	459784.0	3782293.3	606.0	3.70	2.33
2.89 YES							
L0004185	0	0.28870E-07	459784.9	3782288.4	605.8	3.70	2.33
2.89 YES							
L0004186	0	0.28870E-07	459785.8	3782283.5	605.6	3.70	2.33
2.89 YES							
L0004187	0	0.28870E-07	459786.7	3782278.6	605.3	3.70	2.33
2.89 YES							
L0004188	0	0.28870E-07	459787.6	3782273.7	605.2	3.70	2.33
2.89 YES							
L0004189	0	0.28870E-07	459788.5	3782268.7	605.0	3.70	2.33
2.89 YES							
L0004190	0	0.28870E-07	459789.4	3782263.8	604.8	3.70	2.33
2.89 YES							
L0004191	0	0.28870E-07	459790.3	3782258.9	604.6	3.70	2.33
2.89 YES							
L0004192	0	0.28870E-07	459791.2	3782254.0	604.4	3.70	2.33
2.89 YES							
L0004193	0	0.28870E-07	459792.1	3782249.1	604.2	3.70	2.33
2.89 YES							
L0004194	0	0.28870E-07	459793.0	3782244.2	604.0	3.70	2.33
2.89 YES							
L0004195	0	0.28870E-07	459793.9	3782239.2	603.9	3.70	2.33
2.89 YES							
L0004196	0	0.28870E-07	459794.8	3782234.3	603.7	3.70	2.33
2.89 YES							
L0004197	0	0.28870E-07	459795.7	3782229.4	603.5	3.70	2.33
2.89 YES							
L0004198	0	0.28870E-07	459796.6	3782224.5	603.4	3.70	2.33
2.89 YES							
L0004199	0	0.28870E-07	459797.5	3782219.6	603.2	3.70	2.33
2.89 YES							
L0004200	0	0.28870E-07	459798.0	3782214.6	603.0	3.70	2.33
2.89 YES							
L0004201	0	0.28870E-07	459798.0	3782209.6	602.9	3.70	2.33
2.89 YES							
L0004202	0	0.28870E-07	459798.0	3782204.6	602.8	3.70	2.33
2.89 YES							
L0004203	0	0.28870E-07	459798.0	3782199.6	602.6	3.70	2.33
2.89 YES							
L0004204	0	0.28870E-07	459798.0	3782194.6	602.5	3.70	2.33
2.89 YES							
L0004205	0	0.28870E-07	459798.0	3782189.6	602.4	3.70	2.33
2.89 YES							
L0004206	0	0.28870E-07	459798.0	3782184.6	602.3	3.70	2.33
2.89 YES							
L0004207	0	0.28870E-07	459798.0	3782179.6	602.2	3.70	2.33

```
2.89     YES
 L0004208         0   0.28870E-07  459798.0 3782174.6   602.1     3.70     2.33
2.89     YES
 L0004209         0   0.28870E-07  459798.0 3782169.6   602.0     3.70     2.33
2.89     YES
 L0004210         0   0.28870E-07  459798.0 3782164.6   601.9     3.70     2.33
2.89     YES
 L0004211         0   0.28870E-07  459798.0 3782159.6   601.8     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0004212         0   0.28870E-07  459798.0 3782154.6   601.7     3.70     2.33
2.89     YES
 L0004213         0   0.28870E-07  459798.0 3782149.6   601.6     3.70     2.33
2.89     YES
 L0004214         0   0.28870E-07  459798.0 3782144.6   601.5     3.70     2.33
2.89     YES
 L0004215         0   0.28870E-07  459798.0 3782139.6   601.4     3.70     2.33
2.89     YES
 L0004216         0   0.28870E-07  459798.0 3782134.6   601.4     3.70     2.33
2.89     YES
 L0004217         0   0.28870E-07  459798.0 3782129.6   601.3     3.70     2.33
2.89     YES
 L0004218         0   0.28870E-07  459798.0 3782124.6   601.2     3.70     2.33
2.89     YES
 L0004219         0   0.28870E-07  459798.0 3782119.6   601.2     3.70     2.33
2.89     YES
 L0004220         0   0.28870E-07  459798.0 3782114.6   601.1     3.70     2.33
2.89     YES
 L0004221         0   0.28870E-07  459798.0 3782109.6   601.0     3.70     2.33
```

2.89 YES							
L0004222	0	0.28870E-07	459798.0	3782104.6	601.0	3.70	2.33
2.89 YES							
L0004223	0	0.28870E-07	459797.9	3782099.6	600.9	3.70	2.33
2.89 YES							
L0004224	0	0.28870E-07	459797.6	3782094.6	600.9	3.70	2.33
2.89 YES							
L0004225	0	0.28870E-07	459797.4	3782089.6	600.8	3.70	2.33
2.89 YES							
L0004226	0	0.28870E-07	459797.1	3782084.6	600.7	3.70	2.33
2.89 YES							
L0004227	0	0.28870E-07	459796.8	3782079.6	600.5	3.70	2.33
2.89 YES							
L0004228	0	0.28870E-07	459796.6	3782074.6	600.4	3.70	2.33
2.89 YES							
L0004229	0	0.28870E-07	459796.3	3782069.6	600.3	3.70	2.33
2.89 YES							
L0004230	0	0.28870E-07	459796.0	3782064.7	600.2	3.70	2.33
2.89 YES							
L0004231	0	0.28870E-07	459795.8	3782059.7	600.1	3.70	2.33
2.89 YES							
L0004232	0	0.28870E-07	459795.5	3782054.7	600.0	3.70	2.33
2.89 YES							
L0004233	0	0.28870E-07	459795.2	3782049.7	599.8	3.70	2.33
2.89 YES							
L0004234	0	0.28870E-07	459795.2	3782044.7	599.7	3.70	2.33
2.89 YES							
L0004235	0	0.28870E-07	459795.3	3782039.7	599.6	3.70	2.33
2.89 YES							
L0004236	0	0.28870E-07	459795.4	3782034.7	599.4	3.70	2.33
2.89 YES							
L0004237	0	0.28870E-07	459795.5	3782029.7	599.3	3.70	2.33
2.89 YES							
L0004238	0	0.28870E-07	459795.6	3782024.7	599.2	3.70	2.33
2.89 YES							
L0004239	0	0.28870E-07	459795.6	3782019.7	599.0	3.70	2.33
2.89 YES							
L0004240	0	0.28870E-07	459795.7	3782014.7	598.9	3.70	2.33
2.89 YES							
L0004241	0	0.28870E-07	459795.8	3782009.7	598.7	3.70	2.33
2.89 YES							
L0004242	0	0.28870E-07	459795.9	3782004.7	598.6	3.70	2.33
2.89 YES							
L0004243	0	0.28870E-07	459796.0	3781999.7	598.4	3.70	2.33
2.89 YES							
L0004244	0	0.28870E-07	459796.0	3781994.7	598.3	3.70	2.33
2.89 YES							
L0004245	0	0.28870E-07	459796.1	3781989.7	598.1	3.70	2.33

2.89 YES
L0004246 0 0.28870E-07 459796.2 3781984.7 598.0 3.70 2.33
2.89 YES
L0004247 0 0.28870E-07 459796.3 3781979.7 597.9 3.70 2.33
2.89 YES
L0004248 0 0.28870E-07 459796.3 3781974.7 597.7 3.70 2.33
2.89 YES
L0004249 0 0.28870E-07 459796.4 3781969.7 597.6 3.70 2.33
2.89 YES
L0004250 0 0.28870E-07 459796.5 3781964.7 597.5 3.70 2.33
2.89 YES
L0004251 0 0.28870E-07 459796.6 3781959.7 597.4 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0004252	0	0.28870E-07	459796.7	3781954.7	597.2	3.70	2.33	2.89	YES	
L0004253	0	0.28870E-07	459796.7	3781949.7	597.1	3.70	2.33	2.89	YES	
L0004254	0	0.28870E-07	459796.8	3781944.7	597.0	3.70	2.33	2.89	YES	
L0004255	0	0.28870E-07	459796.9	3781939.7	596.9	3.70	2.33	2.89	YES	
L0004256	0	0.28870E-07	459797.0	3781934.7	596.8	3.70	2.33	2.89	YES	
L0004257	0	0.28870E-07	459797.0	3781929.7	596.7	3.70	2.33	2.89	YES	
L0004258	0	0.28870E-07	459797.1	3781924.7	596.6	3.70	2.33	2.89	YES	
L0004259	0	0.28870E-07	459797.2	3781919.7	596.6	3.70	2.33	2.89	YES	

2.89	YES						
L0004260	0	0.28870E-07	459797.3	3781914.7	596.5	3.70	2.33
2.89	YES						
L0004261	0	0.28870E-07	459797.4	3781909.7	596.4	3.70	2.33
2.89	YES						
L0004262	0	0.28870E-07	459797.4	3781904.7	596.4	3.70	2.33
2.89	YES						
L0004263	0	0.28870E-07	459797.5	3781899.7	596.3	3.70	2.33
2.89	YES						
L0004264	0	0.28870E-07	459797.6	3781894.7	596.3	3.70	2.33
2.89	YES						
L0004265	0	0.28870E-07	459797.7	3781889.7	596.3	3.70	2.33
2.89	YES						
L0004266	0	0.28870E-07	459797.7	3781884.7	596.3	3.70	2.33
2.89	YES						
L0004267	0	0.28870E-07	459797.8	3781879.7	596.2	3.70	2.33
2.89	YES						
L0004268	0	0.28870E-07	459797.9	3781874.7	596.2	3.70	2.33
2.89	YES						
L0004269	0	0.28870E-07	459798.0	3781869.7	596.1	3.70	2.33
2.89	YES						
L0004270	0	0.28870E-07	459798.1	3781864.7	596.1	3.70	2.33
2.89	YES						
L0004271	0	0.28870E-07	459798.1	3781859.7	596.0	3.70	2.33
2.89	YES						
L0004272	0	0.28870E-07	459798.2	3781854.7	596.0	3.70	2.33
2.89	YES						
L0004273	0	0.28870E-07	459798.3	3781849.7	595.9	3.70	2.33
2.89	YES						
L0004274	0	0.28870E-07	459798.4	3781844.7	595.8	3.70	2.33
2.89	YES						
L0004275	0	0.28870E-07	459798.4	3781839.7	595.7	3.70	2.33
2.89	YES						
L0004276	0	0.28870E-07	459798.5	3781834.7	595.6	3.70	2.33
2.89	YES						
L0004277	0	0.28870E-07	459798.6	3781829.7	595.5	3.70	2.33
2.89	YES						
L0004278	0	0.28870E-07	459798.7	3781824.7	595.3	3.70	2.33
2.89	YES						
L0004279	0	0.28870E-07	459798.8	3781819.7	595.2	3.70	2.33
2.89	YES						
L0004280	0	0.28870E-07	459798.8	3781814.7	595.1	3.70	2.33
2.89	YES						
L0004281	0	0.28870E-07	459798.9	3781809.7	595.0	3.70	2.33
2.89	YES						
L0004282	0	0.28870E-07	459799.0	3781804.7	594.9	3.70	2.33
2.89	YES						
L0004283	0	0.28870E-07	459799.1	3781799.7	594.8	3.70	2.33

```
2.89     YES
 L0004284         0   0.28870E-07  459799.1 3781794.7   594.6     3.70     2.33
2.89     YES
 L0004285         0   0.28870E-07  459799.2 3781789.7   594.5     3.70     2.33
2.89     YES
 L0004286         0   0.28870E-07  459799.3 3781784.7   594.4     3.70     2.33
2.89     YES
 L0004287         0   0.28870E-07  459799.4 3781779.7   594.3     3.70     2.33
2.89     YES
 L0004288         0   0.28870E-07  459799.5 3781774.7   594.1     3.70     2.33
2.89     YES
 L0004289         0   0.28870E-07  459799.5 3781769.7   594.0     3.70     2.33
2.89     YES
 L0004290         0   0.28870E-07  459799.6 3781764.7   593.9     3.70     2.33
2.89     YES
 L0004291         0   0.28870E-07  459799.7 3781759.7   593.7     3.70     2.33
2.89     YES
```


*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0004292	0	0.28870E-07	459799.8	3781754.7	593.6	3.70	2.33	2.89	YES	
L0004293	0	0.28870E-07	459799.8	3781749.7	593.5	3.70	2.33	2.89	YES	
L0004294	0	0.28870E-07	459799.8	3781744.7	593.3	3.70	2.33	2.89	YES	
L0004295	0	0.28870E-07	459799.8	3781739.7	593.2	3.70	2.33	2.89	YES	
L0004296	0	0.28870E-07	459799.8	3781734.7	593.0	3.70	2.33	2.89	YES	
L0004297	0	0.28870E-07	459799.7	3781729.7	592.9	3.70	2.33			

2.89 YES							
L0004298	0	0.28870E-07	459799.7	3781724.7	592.7	3.70	2.33
2.89 YES							
L0004299	0	0.28870E-07	459799.7	3781719.7	592.6	3.70	2.33
2.89 YES							
L0004300	0	0.28870E-07	459799.7	3781714.7	592.4	3.70	2.33
2.89 YES							
L0004301	0	0.28870E-07	459799.6	3781709.7	592.3	3.70	2.33
2.89 YES							
L0004302	0	0.28870E-07	459799.6	3781704.7	592.2	3.70	2.33
2.89 YES							
L0004303	0	0.28870E-07	459799.6	3781699.7	592.0	3.70	2.33
2.89 YES							
L0004304	0	0.28870E-07	459799.6	3781694.7	591.9	3.70	2.33
2.89 YES							
L0004305	0	0.28870E-07	459799.5	3781689.7	591.8	3.70	2.33
2.89 YES							
L0004306	0	0.28870E-07	459799.5	3781684.7	591.6	3.70	2.33
2.89 YES							
L0004307	0	0.28870E-07	459799.5	3781679.7	591.4	3.70	2.33
2.89 YES							
L0004308	0	0.28870E-07	459799.5	3781674.7	591.2	3.70	2.33
2.89 YES							
L0004309	0	0.28870E-07	459799.4	3781669.7	591.1	3.70	2.33
2.89 YES							
L0004310	0	0.28870E-07	459799.4	3781664.7	590.9	3.70	2.33
2.89 YES							
L0004311	0	0.28870E-07	459799.4	3781659.7	590.7	3.70	2.33
2.89 YES							
L0004312	0	0.28870E-07	459799.4	3781654.7	590.6	3.70	2.33
2.89 YES							
L0004313	0	0.28870E-07	459799.3	3781649.7	590.4	3.70	2.33
2.89 YES							
L0004314	0	0.28870E-07	459799.3	3781644.7	590.2	3.70	2.33
2.89 YES							
L0004315	0	0.28870E-07	459799.3	3781639.7	590.1	3.70	2.33
2.89 YES							
L0004316	0	0.28870E-07	459799.3	3781634.7	589.9	3.70	2.33
2.89 YES							
L0004317	0	0.28870E-07	459799.3	3781629.7	589.8	3.70	2.33
2.89 YES							
L0004318	0	0.28870E-07	459799.2	3781624.7	589.6	3.70	2.33
2.89 YES							
L0004319	0	0.28870E-07	459799.2	3781619.7	589.4	3.70	2.33
2.89 YES							
L0004320	0	0.28870E-07	459799.2	3781614.7	589.3	3.70	2.33
2.89 YES							
L0004321	0	0.28870E-07	459799.2	3781609.7	589.1	3.70	2.33

2.89 YES
L0004322 0 0.28870E-07 459799.1 3781604.7 588.9 3.70 2.33
2.89 YES
L0004323 0 0.28870E-07 459799.1 3781599.7 588.8 3.70 2.33
2.89 YES
L0004324 0 0.28870E-07 459799.1 3781594.7 588.6 3.70 2.33
2.89 YES
L0004325 0 0.28870E-07 459799.1 3781589.7 588.4 3.70 2.33
2.89 YES
L0004326 0 0.28870E-07 459799.0 3781584.7 588.3 3.70 2.33
2.89 YES
L0004327 0 0.28870E-07 459799.0 3781579.7 588.1 3.70 2.33
2.89 YES
L0004328 0 0.28870E-07 459799.0 3781574.7 587.9 3.70 2.33
2.89 YES
L0004329 0 0.28870E-07 459799.0 3781569.7 587.8 3.70 2.33
2.89 YES
L0004330 0 0.28870E-07 459798.9 3781564.7 587.6 3.70 2.33
2.89 YES
L0004331 0 0.28870E-07 459798.9 3781559.7 587.4 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0004332	0	0.28870E-07	459798.9	3781554.7	587.3	3.70	2.33	2.89	YES	
L0004333	0	0.28870E-07	459799.0	3781549.7	587.1	3.70	2.33	2.89	YES	
L0004334	0	0.28870E-07	459799.0	3781544.7	586.9	3.70	2.33	2.89	YES	
L0004335	0	0.28870E-07	459799.1	3781539.7	586.8	3.70	2.33	2.89	YES	

2.89 YES							
L0004336	0	0.28870E-07	459799.1	3781534.7	586.6	3.70	2.33
2.89 YES							
L0004337	0	0.28870E-07	459799.2	3781529.7	586.4	3.70	2.33
2.89 YES							
L0004338	0	0.28870E-07	459799.2	3781524.7	586.2	3.70	2.33
2.89 YES							
L0004339	0	0.28870E-07	459799.2	3781519.7	586.0	3.70	2.33
2.89 YES							
L0004340	0	0.28870E-07	459799.3	3781514.7	585.8	3.70	2.33
2.89 YES							
L0004341	0	0.28870E-07	459799.3	3781509.7	585.7	3.70	2.33
2.89 YES							
L0004342	0	0.28870E-07	459799.4	3781504.7	585.5	3.70	2.33
2.89 YES							
L0004343	0	0.28870E-07	459799.4	3781499.7	585.3	3.70	2.33
2.89 YES							
L0004344	0	0.28870E-07	459799.5	3781494.7	585.1	3.70	2.33
2.89 YES							
L0004345	0	0.28870E-07	459799.5	3781489.7	584.9	3.70	2.33
2.89 YES							
L0004346	0	0.28870E-07	459799.6	3781484.7	584.7	3.70	2.33
2.89 YES							
L0004347	0	0.28870E-07	459799.6	3781479.7	584.5	3.70	2.33
2.89 YES							
L0004348	0	0.28870E-07	459799.7	3781474.7	584.3	3.70	2.33
2.89 YES							
L0004349	0	0.28870E-07	459799.7	3781469.7	584.1	3.70	2.33
2.89 YES							
L0004350	0	0.28870E-07	459799.8	3781464.7	583.9	3.70	2.33
2.89 YES							
L0004351	0	0.28870E-07	459799.8	3781459.7	583.7	3.70	2.33
2.89 YES							
L0004352	0	0.28870E-07	459799.9	3781454.7	583.5	3.70	2.33
2.89 YES							
L0004353	0	0.28870E-07	459799.9	3781449.7	583.3	3.70	2.33
2.89 YES							
L0004354	0	0.28870E-07	459800.0	3781444.7	583.1	3.70	2.33
2.89 YES							
L0004355	0	0.28870E-07	459800.0	3781439.7	583.0	3.70	2.33
2.89 YES							
L0004356	0	0.28870E-07	459800.1	3781434.7	582.8	3.70	2.33
2.89 YES							
L0004357	0	0.28870E-07	459800.1	3781429.7	582.6	3.70	2.33
2.89 YES							
L0004358	0	0.28870E-07	459800.2	3781424.7	582.5	3.70	2.33
2.89 YES							
L0004359	0	0.28870E-07	459800.2	3781419.7	582.3	3.70	2.33

2.89 YES
L0004360 0 0.28870E-07 459800.2 3781414.7 582.1 3.70 2.33
2.89 YES
L0004361 0 0.28870E-07 459800.3 3781409.7 582.0 3.70 2.33
2.89 YES
L0004362 0 0.28870E-07 459800.3 3781404.7 581.8 3.70 2.33
2.89 YES
L0004363 0 0.28870E-07 459800.4 3781399.7 581.6 3.70 2.33
2.89 YES
L0004364 0 0.28870E-07 459800.4 3781394.7 581.4 3.70 2.33
2.89 YES
L0004365 0 0.28870E-07 459800.5 3781389.7 581.2 3.70 2.33
2.89 YES
L0004366 0 0.28870E-07 459800.5 3781384.7 581.0 3.70 2.33
2.89 YES
L0004367 0 0.28870E-07 459800.6 3781379.7 580.8 3.70 2.33
2.89 YES
L0004368 0 0.28870E-07 459800.6 3781374.7 580.6 3.70 2.33
2.89 YES
L0004369 0 0.28870E-07 459800.7 3781369.7 580.4 3.70 2.33
2.89 YES
L0004370 0 0.28870E-07 459800.7 3781364.7 580.2 3.70 2.33
2.89 YES
L0004371 0 0.28870E-07 459800.8 3781359.7 580.0 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004372	0	0.28870E-07	459800.8	3781354.7	579.8	3.70	2.33	2.89	YES	
L0004373	0	0.28870E-07	459800.9	3781349.7	579.6	3.70	2.33			

2.89	YES						
L0004374	0	0.28870E-07	459800.9	3781344.7	579.4	3.70	2.33
2.89	YES						
L0004375	0	0.28870E-07	459801.0	3781339.7	579.2	3.70	2.33
2.89	YES						
L0004376	0	0.28870E-07	459801.0	3781334.7	578.9	3.70	2.33
2.89	YES						
L0004377	0	0.28870E-07	459801.1	3781329.7	578.7	3.70	2.33
2.89	YES						
L0004378	0	0.28870E-07	459801.1	3781324.7	578.5	3.70	2.33
2.89	YES						
L0004379	0	0.28870E-07	459801.1	3781319.7	578.3	3.70	2.33
2.89	YES						
L0004380	0	0.28870E-07	459801.2	3781314.7	578.1	3.70	2.33
2.89	YES						
L0004381	0	0.28870E-07	459801.2	3781309.7	577.9	3.70	2.33
2.89	YES						
L0004382	0	0.28870E-07	459801.3	3781304.7	577.6	3.70	2.33
2.89	YES						
L0004383	0	0.28870E-07	459801.3	3781299.7	577.4	3.70	2.33
2.89	YES						
L0004384	0	0.28870E-07	459801.4	3781294.7	577.2	3.70	2.33
2.89	YES						
L0004385	0	0.28870E-07	459801.4	3781289.7	577.0	3.70	2.33
2.89	YES						
L0004386	0	0.28870E-07	459801.5	3781284.7	576.9	3.70	2.33
2.89	YES						
L0004387	0	0.28870E-07	459801.5	3781279.7	576.7	3.70	2.33
2.89	YES						
L0004388	0	0.28870E-07	459801.6	3781274.7	576.6	3.70	2.33
2.89	YES						
L0004389	0	0.28870E-07	459801.6	3781269.7	576.4	3.70	2.33
2.89	YES						
L0004390	0	0.28870E-07	459801.7	3781264.7	576.3	3.70	2.33
2.89	YES						
L0004391	0	0.28870E-07	459801.7	3781259.7	576.1	3.70	2.33
2.89	YES						
L0004392	0	0.28870E-07	459801.8	3781254.7	576.0	3.70	2.33
2.89	YES						
L0004393	0	0.28870E-07	459801.8	3781249.7	575.9	3.70	2.33
2.89	YES						
L0004394	0	0.28870E-07	459801.9	3781244.7	575.8	3.70	2.33
2.89	YES						
L0004395	0	0.28870E-07	459801.9	3781239.7	575.7	3.70	2.33
2.89	YES						
L0004396	0	0.28870E-07	459802.0	3781234.7	575.5	3.70	2.33
2.89	YES						
L0004397	0	0.28870E-07	459802.0	3781229.7	575.4	3.70	2.33

```
2.89     YES
 L0004398         0   0.28870E-07  459802.0 3781224.7   575.3     3.70     2.33
2.89     YES
 L0004399         0   0.28870E-07  459802.1 3781219.7   575.2     3.70     2.33
2.89     YES
 L0004400         0   0.28870E-07  459802.1 3781214.7   575.1     3.70     2.33
2.89     YES
 L0004401         0   0.28870E-07  459802.2 3781209.7   575.0     3.70     2.33
2.89     YES
 L0004402         0   0.28870E-07  459802.2 3781204.7   574.9     3.70     2.33
2.89     YES
 L0004403         0   0.28870E-07  459802.3 3781199.7   574.8     3.70     2.33
2.89     YES
 L0004404         0   0.28870E-07  459802.3 3781194.7   574.7     3.70     2.33
2.89     YES
 L0004405         0   0.28870E-07  459802.4 3781189.7   574.6     3.70     2.33
2.89     YES
 L0004406         0   0.28870E-07  459802.4 3781184.7   574.5     3.70     2.33
2.89     YES
 L0004407         0   0.28870E-07  459802.5 3781179.7   574.4     3.70     2.33
2.89     YES
 L0004408         0   0.28870E-07  459802.5 3781174.7   574.3     3.70     2.33
2.89     YES
 L0004409         0   0.28870E-07  459802.6 3781169.7   574.2     3.70     2.33
2.89     YES
 L0004410         0   0.28870E-07  459802.6 3781164.7   574.1     3.70     2.33
2.89     YES
 L0004411         0   0.28870E-07  459802.7 3781159.7   574.0     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

                                  PAGE   8
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
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L0004412	0	0.28870E-07	459802.7	3781154.7	573.9	3.70	2.33
2.89	YES						
L0004413	0	0.28870E-07	459802.8	3781149.7	573.8	3.70	2.33
2.89	YES						
L0004414	0	0.28870E-07	459802.8	3781144.7	573.7	3.70	2.33
2.89	YES						
L0004415	0	0.28870E-07	459802.9	3781139.7	573.6	3.70	2.33
2.89	YES						
L0004416	0	0.28870E-07	459802.9	3781134.7	573.5	3.70	2.33
2.89	YES						
L0004417	0	0.28870E-07	459803.0	3781129.7	573.4	3.70	2.33
2.89	YES						
L0004418	0	0.28870E-07	459803.0	3781124.7	573.2	3.70	2.33
2.89	YES						
L0004419	0	0.28870E-07	459803.0	3781119.7	573.1	3.70	2.33
2.89	YES						
L0004420	0	0.28870E-07	459803.1	3781114.7	573.0	3.70	2.33
2.89	YES						
L0004421	0	0.28870E-07	459803.1	3781109.7	572.8	3.70	2.33
2.89	YES						
L0004422	0	0.28870E-07	459803.2	3781104.7	572.7	3.70	2.33
2.89	YES						
L0004423	0	0.28870E-07	459803.2	3781099.7	572.5	3.70	2.33
2.89	YES						
L0004424	0	0.28870E-07	459803.3	3781094.7	572.4	3.70	2.33
2.89	YES						
L0004425	0	0.28870E-07	459803.3	3781089.7	572.2	3.70	2.33
2.89	YES						
L0004426	0	0.28870E-07	459803.4	3781084.7	572.0	3.70	2.33
2.89	YES						
L0004427	0	0.28870E-07	459803.4	3781079.7	571.9	3.70	2.33
2.89	YES						
L0004428	0	0.28870E-07	459803.5	3781074.7	571.7	3.70	2.33
2.89	YES						
L0004429	0	0.28870E-07	459803.5	3781069.7	571.5	3.70	2.33
2.89	YES						
L0004430	0	0.28870E-07	459803.6	3781064.7	571.3	3.70	2.33
2.89	YES						
L0004431	0	0.28870E-07	459803.6	3781059.7	571.2	3.70	2.33
2.89	YES						
L0004432	0	0.28870E-07	459803.7	3781054.7	571.0	3.70	2.33
2.89	YES						
L0004433	0	0.28870E-07	459803.7	3781049.7	570.8	3.70	2.33
2.89	YES						
L0004434	0	0.28870E-07	459803.8	3781044.7	570.6	3.70	2.33
2.89	YES						
L0004435	0	0.28870E-07	459803.8	3781039.7	570.5	3.70	2.33

```
2.89     YES
 L0004436         0   0.28870E-07  459803.9 3781034.7   570.3     3.70     2.33
2.89     YES
 L0004437         0   0.28870E-07  459803.9 3781029.7   570.1     3.70     2.33
2.89     YES
 L0004438         0   0.28870E-07  459803.9 3781024.7   570.0     3.70     2.33
2.89     YES
 L0004439         0   0.28870E-07  459804.0 3781019.7   569.8     3.70     2.33
2.89     YES
 L0004440         0   0.28870E-07  459804.0 3781014.7   569.6     3.70     2.33
2.89     YES
 L0004441         0   0.28870E-07  459804.1 3781009.7   569.5     3.70     2.33
2.89     YES
 L0004442         0   0.28870E-07  459804.1 3781004.7   569.3     3.70     2.33
2.89     YES
 L0004443         0   0.28870E-07  459804.2 3780999.7   569.2     3.70     2.33
2.89     YES
 L0004444         0   0.28870E-07  459804.2 3780994.7   569.0     3.70     2.33
2.89     YES
 L0004445         0   0.28870E-07  459804.3 3780989.7   568.9     3.70     2.33
2.89     YES
 L0004446         0   0.28870E-07  459804.3 3780984.7   568.7     3.70     2.33
2.89     YES
 L0004447         0   0.28870E-07  459804.4 3780979.7   568.6     3.70     2.33
2.89     YES
 L0004448         0   0.28870E-07  459804.4 3780974.7   568.4     3.70     2.33
2.89     YES
 L0004449         0   0.28870E-07  459804.5 3780969.7   568.2     3.70     2.33
2.89     YES
 L0004450         0   0.28870E-07  459804.5 3780964.7   568.0     3.70     2.33
2.89     YES
 L0004451         0   0.28870E-07  459804.6 3780959.7   567.8     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
```

Fontana_Sierra Casa Grande.ADO

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0004452	0	0.28870E-07	459804.6	3780954.7	567.6	3.70	2.33	2.89 YES
L0004453	0	0.28870E-07	459804.7	3780949.7	567.4	3.70	2.33	2.89 YES
L0004454	0	0.28870E-07	459804.7	3780944.7	567.3	3.70	2.33	2.89 YES
L0004455	0	0.28870E-07	459804.8	3780939.7	567.1	3.70	2.33	2.89 YES
L0004456	0	0.28870E-07	459804.8	3780934.7	566.9	3.70	2.33	2.89 YES
L0004457	0	0.28870E-07	459804.8	3780929.7	566.8	3.70	2.33	2.89 YES
L0004458	0	0.28870E-07	459804.9	3780924.7	566.6	3.70	2.33	2.89 YES
L0004459	0	0.28870E-07	459804.9	3780919.7	566.4	3.70	2.33	2.89 YES
L0004460	0	0.28870E-07	459805.0	3780914.7	566.3	3.70	2.33	2.89 YES
L0004461	0	0.28870E-07	459805.0	3780909.7	566.1	3.70	2.33	2.89 YES
L0004462	0	0.28870E-07	459805.1	3780904.7	566.0	3.70	2.33	2.89 YES
L0004463	0	0.28870E-07	459805.1	3780899.7	565.8	3.70	2.33	2.89 YES
L0004464	0	0.28870E-07	459805.2	3780894.7	565.7	3.70	2.33	2.89 YES
L0004465	0	0.28870E-07	459805.2	3780889.7	565.5	3.70	2.33	2.89 YES
L0004466	0	0.28870E-07	459805.3	3780884.7	565.4	3.70	2.33	2.89 YES
L0004467	0	0.28870E-07	459805.3	3780879.7	565.2	3.70	2.33	2.89 YES
L0004468	0	0.28870E-07	459805.4	3780874.7	565.1	3.70	2.33	2.89 YES
L0004469	0	0.28870E-07	459805.4	3780869.7	564.9	3.70	2.33	2.89 YES
L0004470	0	0.28870E-07	459805.5	3780864.7	564.8	3.70	2.33	2.89 YES
L0004471	0	0.28870E-07	459805.5	3780859.7	564.6	3.70	2.33	2.89 YES
L0004472	0	0.28870E-07	459805.6	3780854.7	564.5	3.70	2.33	2.89 YES
L0004473	0	0.28870E-07	459805.6	3780849.7	564.3	3.70	2.33	

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2.89     YES
 L0004474         0   0.28870E-07  459805.7 3780844.8   564.2     3.70     2.33
2.89     YES
 L0004475         0   0.28870E-07  459805.7 3780839.8   564.0     3.70     2.33
2.89     YES
 L0004476         0   0.28870E-07  459805.8 3780834.8   563.9     3.70     2.33
2.89     YES
 L0004477         0   0.28870E-07  459805.8 3780829.8   563.8     3.70     2.33
2.89     YES
 L0004478         0   0.28870E-07  459805.8 3780824.8   563.6     3.70     2.33
2.89     YES
 L0004479         0   0.28870E-07  459805.9 3780819.8   563.4     3.70     2.33
2.89     YES
 L0004480         0   0.28870E-07  459805.9 3780814.8   563.3     3.70     2.33
2.89     YES
 L0004481         0   0.28870E-07  459806.0 3780809.8   563.1     3.70     2.33
2.89     YES
 L0004482         0   0.28870E-07  459806.0 3780804.8   563.0     3.70     2.33
2.89     YES
 L0004483         0   0.28870E-07  459806.1 3780799.8   562.8     3.70     2.33
2.89     YES
 L0004484         0   0.28870E-07  459806.1 3780794.8   562.7     3.70     2.33
2.89     YES
 L0004485         0   0.28870E-07  459806.2 3780789.8   562.5     3.70     2.33
2.89     YES
 L0004486         0   0.28870E-07  459806.2 3780784.8   562.4     3.70     2.33
2.89     YES
 L0004487         0   0.28870E-07  459806.3 3780779.8   562.2     3.70     2.33
2.89     YES
 L0004488         0   0.28870E-07  459806.3 3780774.8   562.1     3.70     2.33
2.89     YES
 L0004489         0   0.28870E-07  459806.3 3780769.8   561.9     3.70     2.33
2.89     YES
 L0004490         0   0.28870E-07  459806.3 3780764.8   561.7     3.70     2.33
2.89     YES
 L0004491         0   0.28870E-07  459806.2 3780759.8   561.6     3.70     2.33
2.89     YES
```


*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY	EMISSION RATE SCALAR
L0004492	0	0.28870E-07	459806.2	3780754.8	561.4	3.70	2.33	2.89	YES	
L0004493	0	0.28870E-07	459806.2	3780749.8	561.2	3.70	2.33	2.89	YES	
L0004494	0	0.28870E-07	459806.1	3780744.8	561.1	3.70	2.33	2.89	YES	
L0004495	0	0.28870E-07	459806.1	3780739.8	560.9	3.70	2.33	2.89	YES	
L0004496	0	0.28870E-07	459806.0	3780734.8	560.8	3.70	2.33	2.89	YES	
L0004497	0	0.28870E-07	459806.0	3780729.8	560.6	3.70	2.33	2.89	YES	
L0004498	0	0.28870E-07	459806.0	3780724.8	560.4	3.70	2.33	2.89	YES	
L0004499	0	0.28870E-07	459805.9	3780719.8	560.2	3.70	2.33	2.89	YES	
L0004500	0	0.28870E-07	459805.9	3780714.8	560.1	3.70	2.33	2.89	YES	
L0004501	0	0.28870E-07	459805.8	3780709.8	559.9	3.70	2.33	2.89	YES	
L0004502	0	0.28870E-07	459805.8	3780704.8	559.7	3.70	2.33	2.89	YES	
L0004503	0	0.28870E-07	459805.8	3780699.8	559.5	3.70	2.33	2.89	YES	
L0004504	0	0.28870E-07	459805.7	3780694.8	559.4	3.70	2.33	2.89	YES	
L0004505	0	0.28870E-07	459805.7	3780689.8	559.2	3.70	2.33	2.89	YES	
L0004506	0	0.28870E-07	459805.7	3780684.8	559.1	3.70	2.33	2.89	YES	
L0004507	0	0.28870E-07	459805.6	3780679.8	558.9	3.70	2.33	2.89	YES	
L0004508	0	0.28870E-07	459805.6	3780674.8	558.7	3.70	2.33	2.89	YES	
L0004509	0	0.28870E-07	459805.5	3780669.8	558.6	3.70	2.33	2.89	YES	
L0004510	0	0.28870E-07	459805.5	3780664.8	558.4	3.70	2.33	2.89	YES	
L0004511	0	0.28870E-07	459805.5	3780659.8	558.3	3.70	2.33			

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2.89     YES
 L0004512         0   0.28870E-07  459805.4 3780654.8   558.1     3.70     2.33
2.89     YES
 L0004513         0   0.28870E-07  459805.4 3780649.8   557.9     3.70     2.33
2.89     YES
 L0004514         0   0.28870E-07  459805.3 3780644.8   557.8     3.70     2.33
2.89     YES
 L0004515         0   0.28870E-07  459805.3 3780639.8   557.6     3.70     2.33
2.89     YES
 L0004516         0   0.28870E-07  459805.3 3780634.8   557.4     3.70     2.33
2.89     YES
 L0004517         0   0.28870E-07  459805.2 3780629.8   557.2     3.70     2.33
2.89     YES
 L0004518         0   0.28870E-07  459805.2 3780624.8   557.0     3.70     2.33
2.89     YES
 L0004519         0   0.28870E-07  459805.2 3780619.8   556.8     3.70     2.33
2.89     YES
 L0004520         0   0.28870E-07  459805.1 3780614.8   556.6     3.70     2.33
2.89     YES
 L0004521         0   0.28870E-07  459805.1 3780609.8   556.4     3.70     2.33
2.89     YES
 L0004522         0   0.28870E-07  459805.0 3780604.8   556.2     3.70     2.33
2.89     YES
 L0004523         0   0.28870E-07  459805.0 3780599.8   556.1     3.70     2.33
2.89     YES
 L0004524         0   0.28870E-07  459805.0 3780594.8   555.9     3.70     2.33
2.89     YES
 L0004525         0   0.28870E-07  459804.9 3780589.8   555.8     3.70     2.33
2.89     YES
 L0004526         0   0.28870E-07  459804.9 3780584.8   555.6     3.70     2.33
2.89     YES
 L0004527         0   0.28870E-07  459804.8 3780579.8   555.4     3.70     2.33
2.89     YES
 L0004528         0   0.28870E-07  459804.8 3780574.8   555.3     3.70     2.33
2.89     YES
 L0004529         0   0.28870E-07  459804.8 3780569.8   555.1     3.70     2.33
2.89     YES
 L0004530         0   0.28870E-07  459804.7 3780564.8   555.0     3.70     2.33
2.89     YES
 L0004531         0   0.28870E-07  459804.7 3780559.8   554.8     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***       10:59:05

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0004532	0	0.28870E-07	459804.7	3780554.8	554.6	3.70	2.33	2.89	YES	
L0004533	0	0.28870E-07	459804.6	3780549.8	554.5	3.70	2.33	2.89	YES	
L0004534	0	0.28870E-07	459804.6	3780544.8	554.4	3.70	2.33	2.89	YES	
L0004535	0	0.28870E-07	459804.5	3780539.8	554.2	3.70	2.33	2.89	YES	
L0004536	0	0.28870E-07	459804.5	3780534.8	554.1	3.70	2.33	2.89	YES	
L0004537	0	0.28870E-07	459804.5	3780529.8	554.0	3.70	2.33	2.89	YES	
L0004538	0	0.28870E-07	459804.4	3780524.8	553.8	3.70	2.33	2.89	YES	
L0004539	0	0.28870E-07	459804.4	3780519.8	553.7	3.70	2.33	2.89	YES	
L0004540	0	0.28870E-07	459804.3	3780514.8	553.6	3.70	2.33	2.89	YES	
L0004541	0	0.28870E-07	459804.3	3780509.8	553.5	3.70	2.33	2.89	YES	
L0004542	0	0.28870E-07	459804.3	3780504.8	553.3	3.70	2.33	2.89	YES	
L0004543	0	0.28870E-07	459804.2	3780499.8	553.2	3.70	2.33	2.89	YES	
L0004544	0	0.28870E-07	459804.2	3780494.8	553.1	3.70	2.33	2.89	YES	
L0004545	0	0.28870E-07	459804.2	3780489.8	553.0	3.70	2.33	2.89	YES	
L0004546	0	0.28870E-07	459804.1	3780484.8	552.8	3.70	2.33	2.89	YES	
L0004547	0	0.28870E-07	459804.1	3780479.8	552.7	3.70	2.33	2.89	YES	
L0004548	0	0.28870E-07	459804.0	3780474.8	552.5	3.70	2.33	2.89	YES	
L0004549	0	0.28870E-07	459804.0	3780469.8	552.4	3.70	2.33			

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2.89     YES
 L0004550         0   0.28870E-07  459804.0 3780464.8   552.3     3.70     2.33
2.89     YES
 L0004551         0   0.28870E-07  459803.9 3780459.8   552.1     3.70     2.33
2.89     YES
 L0004552         0   0.28870E-07  459803.9 3780454.8   552.0     3.70     2.33
2.89     YES
 L0004553         0   0.28870E-07  459803.8 3780449.8   551.8     3.70     2.33
2.89     YES
 L0004554         0   0.28870E-07  459803.8 3780444.8   551.7     3.70     2.33
2.89     YES
 L0004555         0   0.28870E-07  459803.8 3780439.8   551.5     3.70     2.33
2.89     YES
 L0004556         0   0.28870E-07  459803.7 3780434.8   551.4     3.70     2.33
2.89     YES
 L0004557         0   0.28870E-07  459803.7 3780429.8   551.3     3.70     2.33
2.89     YES
 L0004558         0   0.28870E-07  459803.6 3780424.8   551.1     3.70     2.33
2.89     YES
 L0004559         0   0.28870E-07  459803.6 3780419.8   551.0     3.70     2.33
2.89     YES
 L0004560         0   0.28870E-07  459803.6 3780414.8   550.8     3.70     2.33
2.89     YES
 L0004561         0   0.28870E-07  459803.5 3780409.8   550.7     3.70     2.33
2.89     YES
 L0004562         0   0.28870E-07  459803.5 3780404.8   550.5     3.70     2.33
2.89     YES
 L0004563         0   0.28870E-07  459803.5 3780399.8   550.3     3.70     2.33
2.89     YES
 L0004564         0   0.28870E-07  459803.4 3780394.8   550.2     3.70     2.33
2.89     YES
 L0004565         0   0.28870E-07  459803.4 3780389.8   550.0     3.70     2.33
2.89     YES
 L0004566         0   0.28870E-07  459803.3 3780384.8   549.9     3.70     2.33
2.89     YES
 L0004567         0   0.28870E-07  459803.3 3780379.8   549.7     3.70     2.33
2.89     YES
 L0004568         0   0.28870E-07  459803.3 3780374.8   549.6     3.70     2.33
2.89     YES
 L0004569         0   0.28870E-07  459803.2 3780369.8   549.4     3.70     2.33
2.89     YES
 L0004570         0   0.28870E-07  459803.2 3780364.8   549.3     3.70     2.33
2.89     YES
 L0004571         0   0.28870E-07  459803.1 3780359.8   549.1     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0004572	0	0.28870E-07	459803.1	3780354.8	549.0	3.70	2.33	2.89	YES	
L0004573	0	0.28870E-07	459803.1	3780349.8	548.8	3.70	2.33	2.89	YES	
L0004574	0	0.28870E-07	459803.0	3780344.8	548.7	3.70	2.33	2.89	YES	
L0004575	0	0.28870E-07	459803.0	3780339.8	548.6	3.70	2.33	2.89	YES	
L0004576	0	0.28870E-07	459803.0	3780334.8	548.4	3.70	2.33	2.89	YES	
L0004577	0	0.28870E-07	459802.9	3780329.8	548.3	3.70	2.33	2.89	YES	
L0004578	0	0.28870E-07	459802.9	3780324.8	548.2	3.70	2.33	2.89	YES	
L0004579	0	0.28870E-07	459802.8	3780319.8	548.0	3.70	2.33	2.89	YES	
L0004580	0	0.28870E-07	459802.8	3780314.8	547.9	3.70	2.33	2.89	YES	
L0004581	0	0.28870E-07	459802.8	3780309.8	547.8	3.70	2.33	2.89	YES	
L0004582	0	0.28870E-07	459802.7	3780304.8	547.6	3.70	2.33	2.89	YES	
L0004583	0	0.28870E-07	459802.7	3780299.8	547.5	3.70	2.33	2.89	YES	
L0004584	0	0.28870E-07	459802.6	3780294.8	547.4	3.70	2.33	2.89	YES	
L0004585	0	0.28870E-07	459802.6	3780289.8	547.2	3.70	2.33	2.89	YES	
L0004586	0	0.28870E-07	459802.6	3780284.8	547.1	3.70	2.33	2.89	YES	
L0004587	0	0.28870E-07	459802.5	3780279.8	547.0	3.70	2.33			

2.89	YES							
L0004588		0	0.28870E-07	459802.5	3780274.8	546.8	3.70	2.33
2.89	YES							
L0004589		0	0.28870E-07	459802.5	3780269.8	546.7	3.70	2.33
2.89	YES							
L0004590		0	0.28870E-07	459802.4	3780264.8	546.6	3.70	2.33
2.89	YES							
L0004591		0	0.28870E-07	459802.4	3780259.8	546.4	3.70	2.33
2.89	YES							
L0004592		0	0.28870E-07	459802.3	3780254.8	546.3	3.70	2.33
2.89	YES							
L0004593		0	0.28870E-07	459802.3	3780249.8	546.1	3.70	2.33
2.89	YES							
L0004594		0	0.28870E-07	459802.3	3780244.8	546.0	3.70	2.33
2.89	YES							
L0004595		0	0.28870E-07	459802.2	3780239.8	545.9	3.70	2.33
2.89	YES							
L0004596		0	0.28870E-07	459802.2	3780234.8	545.7	3.70	2.33
2.89	YES							
L0004597		0	0.28870E-07	459802.1	3780229.8	545.6	3.70	2.33
2.89	YES							
L0004598		0	0.28870E-07	459802.1	3780224.8	545.5	3.70	2.33
2.89	YES							
L0004599		0	0.28870E-07	459802.1	3780219.8	545.3	3.70	2.33
2.89	YES							
L0004600		0	0.28870E-07	459802.0	3780214.8	545.2	3.70	2.33
2.89	YES							
L0004601		0	0.28870E-07	459802.0	3780209.8	545.1	3.70	2.33
2.89	YES							
L0004602		0	0.28870E-07	459802.0	3780204.8	544.9	3.70	2.33
2.89	YES							
L0004603		0	0.28870E-07	459801.9	3780199.8	544.8	3.70	2.33
2.89	YES							
L0004604		0	0.28870E-07	459801.9	3780194.8	544.6	3.70	2.33
2.89	YES							
L0004605		0	0.28870E-07	459801.8	3780189.8	544.5	3.70	2.33
2.89	YES							
L0004606		0	0.28870E-07	459801.8	3780184.8	544.3	3.70	2.33
2.89	YES							
L0004607		0	0.28870E-07	459801.8	3780179.8	544.2	3.70	2.33
2.89	YES							
L0004608		0	0.28870E-07	459801.7	3780174.8	544.0	3.70	2.33
2.89	YES							
L0004609		0	0.28870E-07	459801.7	3780169.8	543.9	3.70	2.33
2.89	YES							
L0004610		0	0.28870E-07	459801.6	3780164.8	543.7	3.70	2.33
2.89	YES							
L0004611		0	0.28870E-07	459801.6	3780159.8	543.6	3.70	2.33

2.89 YES

*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 05/27/20

*** AERMET - VERSION 16216 *** *** *** 10:59:05

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0004612	0	0.28870E-07	459801.6	3780154.8	543.4	3.70	2.33	2.89	YES	
L0004613	0	0.28870E-07	459801.5	3780149.8	543.3	3.70	2.33	2.89	YES	
L0004614	0	0.28870E-07	459801.5	3780144.8	543.1	3.70	2.33	2.89	YES	
L0004615	0	0.28870E-07	459801.5	3780139.8	543.0	3.70	2.33	2.89	YES	
L0004616	0	0.28870E-07	459801.4	3780134.8	542.8	3.70	2.33	2.89	YES	
L0004617	0	0.28870E-07	459801.4	3780129.8	542.6	3.70	2.33	2.89	YES	
L0004618	0	0.28870E-07	459801.3	3780124.8	542.5	3.70	2.33	2.89	YES	
L0004619	0	0.28870E-07	459801.3	3780119.8	542.3	3.70	2.33	2.89	YES	
L0004620	0	0.28870E-07	459801.3	3780114.8	542.2	3.70	2.33	2.89	YES	
L0004621	0	0.28870E-07	459801.2	3780109.8	542.0	3.70	2.33	2.89	YES	
L0004622	0	0.28870E-07	459801.2	3780104.8	541.8	3.70	2.33	2.89	YES	
L0004623	0	0.28870E-07	459801.1	3780099.8	541.6	3.70	2.33	2.89	YES	
L0004624	0	0.28870E-07	459801.1	3780094.8	541.5	3.70	2.33	2.89	YES	
L0004625	0	0.28870E-07	459801.1	3780089.8	541.3	3.70	2.33			

2.89	YES						
L0004626	0	0.28870E-07	459801.0	3780084.8	541.1	3.70	2.33
2.89	YES						
L0004627	0	0.28870E-07	459801.0	3780079.8	540.9	3.70	2.33
2.89	YES						
L0004628	0	0.28870E-07	459801.0	3780074.8	540.8	3.70	2.33
2.89	YES						
L0004629	0	0.28870E-07	459800.9	3780069.8	540.6	3.70	2.33
2.89	YES						
L0004630	0	0.28870E-07	459800.9	3780064.8	540.4	3.70	2.33
2.89	YES						
L0004631	0	0.28870E-07	459800.8	3780059.8	540.3	3.70	2.33
2.89	YES						
L0004632	0	0.28870E-07	459800.8	3780054.8	540.1	3.70	2.33
2.89	YES						
L0004633	0	0.28870E-07	459800.8	3780049.8	540.0	3.70	2.33
2.89	YES						
L0004634	0	0.28870E-07	459800.7	3780044.8	539.8	3.70	2.33
2.89	YES						
L0004635	0	0.28870E-07	459800.7	3780039.8	539.7	3.70	2.33
2.89	YES						
L0004636	0	0.28870E-07	459800.6	3780034.8	539.5	3.70	2.33
2.89	YES						
L0004637	0	0.28870E-07	459800.6	3780029.8	539.4	3.70	2.33
2.89	YES						
L0004638	0	0.28870E-07	459800.6	3780024.8	539.2	3.70	2.33
2.89	YES						
L0004639	0	0.28870E-07	459800.5	3780019.8	539.1	3.70	2.33
2.89	YES						
L0004640	0	0.28870E-07	459800.5	3780014.8	538.9	3.70	2.33
2.89	YES						
L0004641	0	0.28870E-07	459800.4	3780009.8	538.8	3.70	2.33
2.89	YES						
L0004642	0	0.28870E-07	459800.4	3780004.8	538.7	3.70	2.33
2.89	YES						
L0004643	0	0.28870E-07	459800.4	3779999.8	538.5	3.70	2.33
2.89	YES						
L0004644	0	0.28870E-07	459800.3	3779994.8	538.4	3.70	2.33
2.89	YES						
L0004645	0	0.28870E-07	459800.3	3779989.8	538.2	3.70	2.33
2.89	YES						
L0004646	0	0.28870E-07	459800.3	3779984.8	538.1	3.70	2.33
2.89	YES						
L0004647	0	0.28870E-07	459800.2	3779979.8	537.9	3.70	2.33
2.89	YES						
L0004648	0	0.28870E-07	459800.2	3779974.8	537.8	3.70	2.33
2.89	YES						
L0004649	0	0.28870E-07	459800.1	3779969.8	537.6	3.70	2.33

2.89 YES
L0004650 0 0.28870E-07 459800.1 3779964.8 537.5 3.70 2.33
2.89 YES
L0004651 0 0.28870E-07 459800.1 3779959.8 537.4 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	URBAN EMISSION RATE SCALAR VARY
L0004652	0	0.28870E-07	459800.0	3779954.8	537.2	3.70	2.33	2.89	YES	
L0004653	0	0.28870E-07	459800.0	3779949.8	537.1	3.70	2.33	2.89	YES	
L0004654	0	0.28870E-07	459799.9	3779944.8	536.9	3.70	2.33	2.89	YES	
L0004655	0	0.28870E-07	459799.9	3779939.8	536.8	3.70	2.33	2.89	YES	
L0004656	0	0.28870E-07	459799.9	3779934.8	536.6	3.70	2.33	2.89	YES	
L0004657	0	0.28870E-07	459799.8	3779929.8	536.5	3.70	2.33	2.89	YES	
L0004658	0	0.28870E-07	459799.8	3779924.8	536.4	3.70	2.33	2.89	YES	
L0004659	0	0.28870E-07	459799.8	3779919.8	536.2	3.70	2.33	2.89	YES	
L0004660	0	0.28870E-07	459799.7	3779914.8	536.1	3.70	2.33	2.89	YES	
L0004661	0	0.28870E-07	459799.7	3779909.8	535.9	3.70	2.33	2.89	YES	
L0004662	0	0.28870E-07	459799.6	3779904.8	535.8	3.70	2.33	2.89	YES	
L0004663	0	0.28870E-07	459799.6	3779899.8	535.7	3.70	2.33			

2.89 YES							
L0004664	0	0.28870E-07	459799.6	3779894.8	535.5	3.70	2.33
2.89 YES							
L0004665	0	0.28870E-07	459799.5	3779889.8	535.4	3.70	2.33
2.89 YES							
L0004666	0	0.28870E-07	459799.5	3779884.8	535.3	3.70	2.33
2.89 YES							
L0004667	0	0.28870E-07	459799.4	3779879.8	535.1	3.70	2.33
2.89 YES							
L0004668	0	0.28870E-07	459799.4	3779874.8	535.0	3.70	2.33
2.89 YES							
L0004669	0	0.28870E-07	459799.4	3779869.8	534.8	3.70	2.33
2.89 YES							
L0004670	0	0.28870E-07	459799.3	3779864.8	534.7	3.70	2.33
2.89 YES							
L0004671	0	0.28870E-07	459799.3	3779859.8	534.5	3.70	2.33
2.89 YES							
L0004672	0	0.28870E-07	459799.3	3779854.8	534.4	3.70	2.33
2.89 YES							
L0004673	0	0.28870E-07	459799.2	3779849.8	534.2	3.70	2.33
2.89 YES							
L0004674	0	0.28870E-07	459799.2	3779844.8	534.0	3.70	2.33
2.89 YES							
L0004675	0	0.28870E-07	459799.1	3779839.8	533.9	3.70	2.33
2.89 YES							
L0004676	0	0.28870E-07	459799.1	3779834.8	533.7	3.70	2.33
2.89 YES							
L0004677	0	0.28870E-07	459799.1	3779829.8	533.6	3.70	2.33
2.89 YES							
L0004678	0	0.28870E-07	459799.0	3779824.8	533.4	3.70	2.33
2.89 YES							
L0004679	0	0.28870E-07	459799.0	3779819.8	533.3	3.70	2.33
2.89 YES							
L0004680	0	0.28870E-07	459798.9	3779814.8	533.1	3.70	2.33
2.89 YES							
L0004681	0	0.28870E-07	459798.9	3779809.8	533.0	3.70	2.33
2.89 YES							
L0004682	0	0.28870E-07	459798.9	3779804.8	532.9	3.70	2.33
2.89 YES							
L0004683	0	0.28870E-07	459798.8	3779799.8	532.7	3.70	2.33
2.89 YES							
L0004684	0	0.28870E-07	459798.8	3779794.8	532.6	3.70	2.33
2.89 YES							
L0004685	0	0.28870E-07	459798.8	3779789.8	532.5	3.70	2.33
2.89 YES							
L0004686	0	0.28870E-07	459798.7	3779784.8	532.3	3.70	2.33
2.89 YES							
L0004687	0	0.28870E-07	459798.7	3779779.8	532.2	3.70	2.33

2.89 YES
L0004688 0 0.28870E-07 459798.6 3779774.8 532.1 3.70 2.33
2.89 YES
L0004689 0 0.28870E-07 459798.6 3779769.8 532.0 3.70 2.33
2.89 YES
L0004690 0 0.28870E-07 459798.6 3779764.8 531.8 3.70 2.33
2.89 YES
L0004691 0 0.28870E-07 459798.5 3779759.8 531.7 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0004692	0	0.28870E-07	459798.5	3779754.8	531.6	3.70	2.33	2.89	YES	
L0004693	0	0.28870E-07	459798.4	3779749.8	531.5	3.70	2.33	2.89	YES	
L0004694	0	0.28870E-07	459798.4	3779744.8	531.3	3.70	2.33	2.89	YES	
L0004695	0	0.26110E-06	459795.8	3777390.0	467.2	3.70	2.33	2.89	YES	
L0004696	0	0.26110E-06	459795.7	3777395.0	468.0	3.70	2.33	2.89	YES	
L0004697	0	0.26110E-06	459795.5	3777400.0	468.9	3.70	2.33	2.89	YES	
L0004698	0	0.26110E-06	459795.4	3777405.0	469.8	3.70	2.33	2.89	YES	
L0004699	0	0.26110E-06	459795.3	3777410.0	470.7	3.70	2.33	2.89	YES	
L0004700	0	0.26110E-06	459795.2	3777415.0	470.9	3.70	2.33	2.89	YES	
L0004701	0	0.26110E-06	459795.0	3777420.0	471.0	3.70	2.33	2.89	YES	

2.89	YES						
L0004702	0	0.26110E-06	459794.9	3777425.0	471.1	3.70	2.33
2.89	YES						
L0004703	0	0.26110E-06	459794.8	3777430.0	471.2	3.70	2.33
2.89	YES						
L0004704	0	0.26110E-06	459794.7	3777435.0	471.3	3.70	2.33
2.89	YES						
L0004705	0	0.26110E-06	459794.5	3777440.0	471.4	3.70	2.33
2.89	YES						
L0004706	0	0.26110E-06	459794.4	3777444.9	471.5	3.70	2.33
2.89	YES						
L0004707	0	0.26110E-06	459794.3	3777449.9	471.5	3.70	2.33
2.89	YES						
L0004708	0	0.26110E-06	459794.2	3777454.9	471.5	3.70	2.33
2.89	YES						
L0004709	0	0.26110E-06	459794.0	3777459.9	471.6	3.70	2.33
2.89	YES						
L0004710	0	0.26110E-06	459793.9	3777464.9	471.6	3.70	2.33
2.89	YES						
L0004711	0	0.26110E-06	459793.8	3777469.9	471.7	3.70	2.33
2.89	YES						
L0004712	0	0.26110E-06	459793.7	3777474.9	471.7	3.70	2.33
2.89	YES						
L0004713	0	0.26110E-06	459793.5	3777479.9	471.8	3.70	2.33
2.89	YES						
L0004714	0	0.26110E-06	459793.4	3777484.9	471.8	3.70	2.33
2.89	YES						
L0004715	0	0.26110E-06	459793.3	3777489.9	471.9	3.70	2.33
2.89	YES						
L0004716	0	0.26110E-06	459793.1	3777494.9	471.9	3.70	2.33
2.89	YES						
L0004717	0	0.26110E-06	459793.0	3777499.9	472.0	3.70	2.33
2.89	YES						
L0004718	0	0.26110E-06	459792.9	3777504.9	472.1	3.70	2.33
2.89	YES						
L0004719	0	0.26110E-06	459792.8	3777509.9	472.2	3.70	2.33
2.89	YES						
L0004720	0	0.26110E-06	459792.6	3777514.9	472.3	3.70	2.33
2.89	YES						
L0004721	0	0.26110E-06	459792.5	3777519.9	472.4	3.70	2.33
2.89	YES						
L0004722	0	0.26110E-06	459792.4	3777524.9	472.5	3.70	2.33
2.89	YES						
L0004723	0	0.26110E-06	459792.3	3777529.9	472.6	3.70	2.33
2.89	YES						
L0004724	0	0.26110E-06	459792.1	3777534.9	472.8	3.70	2.33
2.89	YES						
L0004725	0	0.26110E-06	459792.0	3777539.9	472.9	3.70	2.33

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2.89     YES
 L0004726         0   0.26110E-06  459791.9 3777544.9   473.0     3.70     2.33
2.89     YES
 L0004727         0   0.26110E-06  459791.8 3777549.9   473.1     3.70     2.33
2.89     YES
 L0004728         0   0.26110E-06  459791.7 3777554.9   473.3     3.70     2.33
2.89     YES
 L0004729         0   0.26110E-06  459791.7 3777559.9   473.4     3.70     2.33
2.89     YES
 L0004730         0   0.26110E-06  459791.8 3777564.9   473.5     3.70     2.33
2.89     YES
 L0004731         0   0.26110E-06  459791.8 3777569.9   473.6     3.70     2.33
2.89     YES
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0004732	0	0.26110E-06	459791.8	3777574.9	473.8	3.70	2.33	2.89	YES	
L0004733	0	0.26110E-06	459791.8	3777579.9	473.9	3.70	2.33	2.89	YES	
L0004734	0	0.26110E-06	459791.9	3777584.9	474.0	3.70	2.33	2.89	YES	
L0004735	0	0.26110E-06	459791.9	3777589.9	474.1	3.70	2.33	2.89	YES	
L0004736	0	0.26110E-06	459791.9	3777594.9	474.2	3.70	2.33	2.89	YES	
L0004737	0	0.26110E-06	459791.9	3777599.9	474.4	3.70	2.33	2.89	YES	
L0004738	0	0.26110E-06	459792.0	3777604.9	474.5	3.70	2.33	2.89	YES	
L0004739	0	0.26110E-06	459792.0	3777609.9	474.6	3.70	2.33	2.89	YES	

2.89 YES							
L0004740	0	0.26110E-06	459792.0	3777614.9	474.8	3.70	2.33
2.89 YES							
L0004741	0	0.26110E-06	459792.0	3777619.9	474.9	3.70	2.33
2.89 YES							
L0004742	0	0.26110E-06	459792.1	3777624.9	475.0	3.70	2.33
2.89 YES							
L0004743	0	0.26110E-06	459792.1	3777629.9	475.1	3.70	2.33
2.89 YES							
L0004744	0	0.26110E-06	459792.1	3777634.9	475.2	3.70	2.33
2.89 YES							
L0004745	0	0.26110E-06	459792.2	3777639.9	475.4	3.70	2.33
2.89 YES							
L0004746	0	0.26110E-06	459792.2	3777644.9	475.5	3.70	2.33
2.89 YES							
L0004747	0	0.26110E-06	459792.2	3777649.9	475.6	3.70	2.33
2.89 YES							
L0004748	0	0.26110E-06	459792.2	3777654.9	475.7	3.70	2.33
2.89 YES							
L0004749	0	0.26110E-06	459792.3	3777659.9	475.8	3.70	2.33
2.89 YES							
L0004750	0	0.26110E-06	459792.3	3777664.9	475.9	3.70	2.33
2.89 YES							
L0004751	0	0.26110E-06	459792.3	3777669.9	476.1	3.70	2.33
2.89 YES							
L0004752	0	0.26110E-06	459792.3	3777674.9	476.2	3.70	2.33
2.89 YES							
L0004753	0	0.26110E-06	459792.4	3777679.9	476.3	3.70	2.33
2.89 YES							
L0004754	0	0.26110E-06	459792.4	3777684.9	476.4	3.70	2.33
2.89 YES							
L0004755	0	0.26110E-06	459792.4	3777689.9	476.5	3.70	2.33
2.89 YES							
L0004756	0	0.26110E-06	459792.4	3777694.9	476.6	3.70	2.33
2.89 YES							
L0004757	0	0.26110E-06	459792.5	3777699.9	476.8	3.70	2.33
2.89 YES							
L0004758	0	0.26110E-06	459792.5	3777704.9	476.9	3.70	2.33
2.89 YES							
L0004759	0	0.26110E-06	459792.5	3777709.9	477.0	3.70	2.33
2.89 YES							
L0004760	0	0.26110E-06	459792.5	3777714.9	477.1	3.70	2.33
2.89 YES							
L0004761	0	0.26110E-06	459792.6	3777719.9	477.2	3.70	2.33
2.89 YES							
L0004762	0	0.26110E-06	459792.6	3777724.9	477.4	3.70	2.33
2.89 YES							
L0004763	0	0.26110E-06	459792.6	3777729.9	477.5	3.70	2.33

2.89 YES
L0004764 0 0.26110E-06 459792.6 3777734.9 477.6 3.70 2.33
2.89 YES
L0004765 0 0.26110E-06 459792.7 3777739.9 477.7 3.70 2.33
2.89 YES
L0004766 0 0.26110E-06 459792.7 3777744.9 477.9 3.70 2.33
2.89 YES
L0004767 0 0.26110E-06 459792.7 3777749.9 478.0 3.70 2.33
2.89 YES
L0004768 0 0.26110E-06 459792.7 3777754.9 478.1 3.70 2.33
2.89 YES
L0004769 0 0.26110E-06 459792.8 3777759.9 478.2 3.70 2.33
2.89 YES
L0004770 0 0.26110E-06 459792.8 3777764.9 478.4 3.70 2.33
2.89 YES
L0004771 0 0.26110E-06 459792.8 3777769.9 478.5 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0004772	0	0.26110E-06	459792.8	3777774.9	478.7	3.70	2.33	2.89	YES	
L0004773	0	0.26110E-06	459792.9	3777779.9	478.8	3.70	2.33	2.89	YES	
L0004774	0	0.26110E-06	459792.9	3777784.9	478.9	3.70	2.33	2.89	YES	
L0004775	0	0.26110E-06	459792.9	3777789.9	479.0	3.70	2.33	2.89	YES	
L0004776	0	0.26110E-06	459792.9	3777794.9	479.2	3.70	2.33	2.89	YES	
L0004777	0	0.26110E-06	459793.0	3777799.9	479.3	3.70	2.33			

2.89 YES							
L0004778	0	0.26110E-06	459793.0	3777804.9	479.4	3.70	2.33
2.89 YES							
L0004779	0	0.26110E-06	459793.0	3777809.9	479.5	3.70	2.33
2.89 YES							
L0004780	0	0.26110E-06	459793.0	3777814.9	479.7	3.70	2.33
2.89 YES							
L0004781	0	0.26110E-06	459793.1	3777819.9	479.8	3.70	2.33
2.89 YES							
L0004782	0	0.26110E-06	459793.1	3777824.9	480.0	3.70	2.33
2.89 YES							
L0004783	0	0.26110E-06	459793.1	3777829.9	480.1	3.70	2.33
2.89 YES							
L0004784	0	0.26110E-06	459793.1	3777834.9	480.3	3.70	2.33
2.89 YES							
L0004785	0	0.26110E-06	459793.2	3777839.9	480.4	3.70	2.33
2.89 YES							
L0004786	0	0.26110E-06	459793.2	3777844.9	480.6	3.70	2.33
2.89 YES							
L0004787	0	0.26110E-06	459793.2	3777849.9	480.7	3.70	2.33
2.89 YES							
L0004788	0	0.26110E-06	459793.2	3777854.9	480.8	3.70	2.33
2.89 YES							
L0004789	0	0.26110E-06	459793.3	3777859.9	480.9	3.70	2.33
2.89 YES							
L0004790	0	0.26110E-06	459793.3	3777864.9	481.1	3.70	2.33
2.89 YES							
L0004791	0	0.26110E-06	459793.3	3777869.9	481.2	3.70	2.33
2.89 YES							
L0004792	0	0.26110E-06	459793.3	3777874.9	481.3	3.70	2.33
2.89 YES							
L0004793	0	0.26110E-06	459793.4	3777879.9	481.4	3.70	2.33
2.89 YES							
L0004794	0	0.26110E-06	459793.4	3777884.9	481.6	3.70	2.33
2.89 YES							
L0004795	0	0.26110E-06	459793.4	3777889.9	481.7	3.70	2.33
2.89 YES							
L0004796	0	0.26110E-06	459793.5	3777894.9	481.8	3.70	2.33
2.89 YES							
L0004797	0	0.26110E-06	459793.5	3777899.9	481.9	3.70	2.33
2.89 YES							
L0004798	0	0.26110E-06	459793.5	3777904.9	482.1	3.70	2.33
2.89 YES							
L0004799	0	0.26110E-06	459793.5	3777909.9	482.2	3.70	2.33
2.89 YES							
L0004800	0	0.26110E-06	459793.6	3777914.9	482.3	3.70	2.33
2.89 YES							
L0004801	0	0.26110E-06	459793.6	3777919.9	482.4	3.70	2.33

```
2.89     YES
 L0004802         0   0.26110E-06  459793.6 3777924.9   482.5     3.70     2.33
2.89     YES
 L0004803         0   0.26110E-06  459793.6 3777929.9   482.6     3.70     2.33
2.89     YES
 L0004804         0   0.26110E-06  459793.7 3777934.9   482.8     3.70     2.33
2.89     YES
 L0004805         0   0.26110E-06  459793.7 3777939.9   482.9     3.70     2.33
2.89     YES
 L0004806         0   0.26110E-06  459793.7 3777944.9   483.0     3.70     2.33
2.89     YES
 L0004807         0   0.26110E-06  459793.7 3777949.9   483.2     3.70     2.33
2.89     YES
 L0004808         0   0.26110E-06  459793.8 3777954.9   483.3     3.70     2.33
2.89     YES
 L0004809         0   0.26110E-06  459793.8 3777959.9   483.4     3.70     2.33
2.89     YES
 L0004810         0   0.26110E-06  459793.8 3777964.9   483.6     3.70     2.33
2.89     YES
 L0004811         0   0.26110E-06  459793.8 3777969.9   483.7     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

                                  PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
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- - - - - - - - - - - - - - - - - - - - -

 L0004812         0   0.26110E-06  459793.9 3777974.9   483.9     3.70     2.33
2.89     YES
 L0004813         0   0.26110E-06  459793.9 3777979.9   484.0     3.70     2.33
2.89     YES
 L0004814         0   0.26110E-06  459793.9 3777984.9   484.2     3.70     2.33
2.89     YES
 L0004815         0   0.26110E-06  459793.9 3777989.9   484.4     3.70     2.33
```

2.89 YES							
L0004816	0	0.26110E-06	459794.0	3777994.9	484.5	3.70	2.33
2.89 YES							
L0004817	0	0.26110E-06	459794.0	3777999.9	484.7	3.70	2.33
2.89 YES							
L0004818	0	0.26110E-06	459794.0	3778004.9	484.8	3.70	2.33
2.89 YES							
L0004819	0	0.26110E-06	459794.0	3778009.9	484.9	3.70	2.33
2.89 YES							
L0004820	0	0.26110E-06	459794.1	3778014.9	485.0	3.70	2.33
2.89 YES							
L0004821	0	0.26110E-06	459794.1	3778019.9	485.2	3.70	2.33
2.89 YES							
L0004822	0	0.26110E-06	459794.1	3778024.9	485.3	3.70	2.33
2.89 YES							
L0004823	0	0.26110E-06	459794.1	3778029.9	485.4	3.70	2.33
2.89 YES							
L0004824	0	0.26110E-06	459794.2	3778034.9	485.6	3.70	2.33
2.89 YES							
L0004825	0	0.26110E-06	459794.2	3778039.9	485.7	3.70	2.33
2.89 YES							
L0004826	0	0.26110E-06	459794.2	3778044.9	485.9	3.70	2.33
2.89 YES							
L0004827	0	0.26110E-06	459794.2	3778049.9	486.0	3.70	2.33
2.89 YES							
L0004828	0	0.26110E-06	459794.3	3778054.9	486.1	3.70	2.33
2.89 YES							
L0004829	0	0.26110E-06	459794.3	3778059.9	486.3	3.70	2.33
2.89 YES							
L0004830	0	0.26110E-06	459794.3	3778064.9	486.4	3.70	2.33
2.89 YES							
L0004831	0	0.26110E-06	459794.3	3778069.9	486.5	3.70	2.33
2.89 YES							
L0004832	0	0.26110E-06	459794.4	3778074.9	486.6	3.70	2.33
2.89 YES							
L0004833	0	0.26110E-06	459794.4	3778079.9	486.7	3.70	2.33
2.89 YES							
L0004834	0	0.26110E-06	459794.4	3778084.9	486.9	3.70	2.33
2.89 YES							
L0004835	0	0.26110E-06	459794.4	3778089.9	487.0	3.70	2.33
2.89 YES							
L0004836	0	0.26110E-06	459794.5	3778094.9	487.1	3.70	2.33
2.89 YES							
L0004837	0	0.26110E-06	459794.5	3778099.9	487.2	3.70	2.33
2.89 YES							
L0004838	0	0.26110E-06	459794.5	3778104.9	487.3	3.70	2.33
2.89 YES							
L0004839	0	0.26110E-06	459794.5	3778109.9	487.4	3.70	2.33

2.89 YES
L0004840 0 0.26110E-06 459794.6 3778114.9 487.5 3.70 2.33
2.89 YES
L0004841 0 0.26110E-06 459794.6 3778119.9 487.6 3.70 2.33
2.89 YES
L0004842 0 0.26110E-06 459794.6 3778124.9 487.7 3.70 2.33
2.89 YES
L0004843 0 0.26110E-06 459794.6 3778129.9 487.9 3.70 2.33
2.89 YES
L0004844 0 0.26110E-06 459794.7 3778134.9 488.0 3.70 2.33
2.89 YES
L0004845 0 0.26110E-06 459794.7 3778139.9 488.1 3.70 2.33
2.89 YES
L0004846 0 0.26110E-06 459794.7 3778144.9 488.2 3.70 2.33
2.89 YES
L0004847 0 0.26110E-06 459794.8 3778149.9 488.4 3.70 2.33
2.89 YES
L0004848 0 0.26110E-06 459794.8 3778154.9 488.5 3.70 2.33
2.89 YES
L0004849 0 0.26110E-06 459794.8 3778159.9 488.6 3.70 2.33
2.89 YES
L0004850 0 0.26110E-06 459794.8 3778164.9 488.7 3.70 2.33
2.89 YES
L0004851 0 0.26110E-06 459794.9 3778169.9 488.8 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0004852	0	0.26110E-06	459794.9	3778174.9	488.9	3.70	2.33	2.89	YES	
L0004853	0	0.26110E-06	459794.9	3778179.9	489.0	3.70	2.33			

2.89 YES							
L0004854	0	0.26110E-06	459794.9	3778184.9	489.1	3.70	2.33
2.89 YES							
L0004855	0	0.26110E-06	459795.0	3778189.9	489.2	3.70	2.33
2.89 YES							
L0004856	0	0.26110E-06	459795.0	3778194.9	489.3	3.70	2.33
2.89 YES							
L0004857	0	0.26110E-06	459795.0	3778199.9	489.4	3.70	2.33
2.89 YES							
L0004858	0	0.26110E-06	459795.0	3778204.9	489.5	3.70	2.33
2.89 YES							
L0004859	0	0.26110E-06	459795.1	3778209.9	489.6	3.70	2.33
2.89 YES							
L0004860	0	0.26110E-06	459795.1	3778214.9	489.8	3.70	2.33
2.89 YES							
L0004861	0	0.26110E-06	459795.1	3778219.9	489.9	3.70	2.33
2.89 YES							
L0004862	0	0.26110E-06	459795.1	3778224.9	490.0	3.70	2.33
2.89 YES							
L0004863	0	0.26110E-06	459795.2	3778229.9	490.1	3.70	2.33
2.89 YES							
L0004864	0	0.26110E-06	459795.2	3778234.9	490.2	3.70	2.33
2.89 YES							
L0004865	0	0.26110E-06	459795.2	3778239.9	490.3	3.70	2.33
2.89 YES							
L0004866	0	0.26110E-06	459795.2	3778244.9	490.4	3.70	2.33
2.89 YES							
L0004867	0	0.26110E-06	459795.3	3778249.9	490.5	3.70	2.33
2.89 YES							
L0004868	0	0.26110E-06	459795.3	3778254.9	490.7	3.70	2.33
2.89 YES							
L0004869	0	0.26110E-06	459795.3	3778259.9	490.8	3.70	2.33
2.89 YES							
L0004870	0	0.26110E-06	459795.3	3778264.9	490.9	3.70	2.33
2.89 YES							
L0004871	0	0.26110E-06	459795.4	3778269.9	491.0	3.70	2.33
2.89 YES							
L0004872	0	0.26110E-06	459795.4	3778274.9	491.2	3.70	2.33
2.89 YES							
L0004873	0	0.26110E-06	459795.4	3778279.9	491.3	3.70	2.33
2.89 YES							
L0004874	0	0.26110E-06	459795.4	3778284.9	491.4	3.70	2.33
2.89 YES							
L0004875	0	0.26110E-06	459795.5	3778289.9	491.5	3.70	2.33
2.89 YES							
L0004876	0	0.26110E-06	459795.5	3778294.9	491.7	3.70	2.33
2.89 YES							
L0004877	0	0.26110E-06	459795.5	3778299.9	491.8	3.70	2.33

```
2.89     YES
 L0004878         0   0.26110E-06  459795.5 3778304.9   491.9     3.70     2.33
2.89     YES
 L0004879         0   0.26110E-06  459795.6 3778309.9   492.0     3.70     2.33
2.89     YES
 L0004880         0   0.26110E-06  459795.6 3778314.9   492.2     3.70     2.33
2.89     YES
 L0004881         0   0.26110E-06  459795.6 3778319.9   492.3     3.70     2.33
2.89     YES
 L0004882         0   0.26110E-06  459795.6 3778324.9   492.5     3.70     2.33
2.89     YES
 L0004883         0   0.26110E-06  459795.7 3778329.9   492.6     3.70     2.33
2.89     YES
 L0004884         0   0.26110E-06  459795.7 3778334.9   492.8     3.70     2.33
2.89     YES
 L0004885         0   0.26110E-06  459795.7 3778339.9   492.9     3.70     2.33
2.89     YES
 L0004886         0   0.26110E-06  459795.7 3778344.9   493.1     3.70     2.33
2.89     YES
 L0004887         0   0.26110E-06  459795.8 3778349.9   493.2     3.70     2.33
2.89     YES
 L0004888         0   0.26110E-06  459795.8 3778354.9   493.4     3.70     2.33
2.89     YES
 L0004889         0   0.26110E-06  459795.8 3778359.9   493.5     3.70     2.33
2.89     YES
 L0004890         0   0.26110E-06  459795.8 3778364.9   493.7     3.70     2.33
2.89     YES
 L0004891         0   0.26110E-06  459795.9 3778369.9   493.8     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
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L0004892	0	0.26110E-06	459795.9	3778374.9	493.9	3.70	2.33	2.89 YES
L0004893	0	0.26110E-06	459795.9	3778379.9	494.1	3.70	2.33	2.89 YES
L0004894	0	0.26110E-06	459795.9	3778384.9	494.2	3.70	2.33	2.89 YES
L0004895	0	0.26110E-06	459796.0	3778389.9	494.3	3.70	2.33	2.89 YES
L0004896	0	0.26110E-06	459796.0	3778394.9	494.5	3.70	2.33	2.89 YES
L0004897	0	0.26110E-06	459796.0	3778399.9	494.6	3.70	2.33	2.89 YES
L0004898	0	0.26110E-06	459796.0	3778404.9	494.7	3.70	2.33	2.89 YES
L0004899	0	0.26110E-06	459796.1	3778409.9	494.8	3.70	2.33	2.89 YES
L0004900	0	0.26110E-06	459796.1	3778414.9	494.9	3.70	2.33	2.89 YES
L0004901	0	0.26110E-06	459796.1	3778419.9	495.1	3.70	2.33	2.89 YES
L0004902	0	0.26110E-06	459796.1	3778424.9	495.2	3.70	2.33	2.89 YES
L0004903	0	0.26110E-06	459796.2	3778429.9	495.3	3.70	2.33	2.89 YES
L0004904	0	0.26110E-06	459796.2	3778434.9	495.4	3.70	2.33	2.89 YES
L0004905	0	0.26110E-06	459796.2	3778439.9	495.6	3.70	2.33	2.89 YES
L0004906	0	0.26110E-06	459796.3	3778444.9	495.7	3.70	2.33	2.89 YES
L0004907	0	0.26110E-06	459796.3	3778449.9	495.9	3.70	2.33	2.89 YES
L0004908	0	0.26110E-06	459796.3	3778454.9	496.0	3.70	2.33	2.89 YES
L0004909	0	0.26110E-06	459796.3	3778459.9	496.2	3.70	2.33	2.89 YES
L0004910	0	0.26110E-06	459796.4	3778464.9	496.3	3.70	2.33	2.89 YES
L0004911	0	0.26110E-06	459796.4	3778469.9	496.4	3.70	2.33	2.89 YES
L0004912	0	0.26110E-06	459796.4	3778474.9	496.5	3.70	2.33	2.89 YES
L0004913	0	0.26110E-06	459796.4	3778479.9	496.7	3.70	2.33	2.89 YES
L0004914	0	0.26110E-06	459796.5	3778484.9	496.8	3.70	2.33	2.89 YES
L0004915	0	0.26110E-06	459796.5	3778489.9	496.9	3.70	2.33	

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2.89     YES
 L0004916         0   0.26110E-06  459796.5 3778494.9   497.1     3.70     2.33
2.89     YES
 L0004917         0   0.26110E-06  459796.5 3778499.9   497.2     3.70     2.33
2.89     YES
 L0004918         0   0.26110E-06  459796.6 3778504.9   497.4     3.70     2.33
2.89     YES
 L0004919         0   0.26110E-06  459796.6 3778509.9   497.5     3.70     2.33
2.89     YES
 L0004920         0   0.26110E-06  459796.6 3778514.9   497.6     3.70     2.33
2.89     YES
 L0004921         0   0.26110E-06  459796.6 3778519.9   497.8     3.70     2.33
2.89     YES
 L0004922         0   0.26110E-06  459796.7 3778524.9   497.9     3.70     2.33
2.89     YES
 L0004923         0   0.26110E-06  459796.7 3778529.9   498.1     3.70     2.33
2.89     YES
 L0004924         0   0.26110E-06  459796.7 3778534.9   498.2     3.70     2.33
2.89     YES
 L0004925         0   0.26110E-06  459796.7 3778539.9   498.4     3.70     2.33
2.89     YES
 L0004926         0   0.26110E-06  459796.8 3778544.9   498.6     3.70     2.33
2.89     YES
 L0004927         0   0.26110E-06  459796.8 3778549.9   498.7     3.70     2.33
2.89     YES
 L0004928         0   0.26110E-06  459796.8 3778554.9   498.8     3.70     2.33
2.89     YES
 L0004929         0   0.26110E-06  459796.8 3778559.9   499.0     3.70     2.33
2.89     YES
 L0004930         0   0.26110E-06  459796.9 3778564.9   499.1     3.70     2.33
2.89     YES
 L0004931         0   0.26110E-06  459796.9 3778569.9   499.2     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
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Fontana_Sierra Casa Grande.ADO

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0004932	0	0.26110E-06	459796.9	3778574.9	499.4	3.70	2.33	2.89 YES
L0004933	0	0.26110E-06	459796.9	3778579.9	499.5	3.70	2.33	2.89 YES
L0004934	0	0.26110E-06	459797.0	3778584.9	499.7	3.70	2.33	2.89 YES
L0004935	0	0.26110E-06	459797.0	3778589.9	499.8	3.70	2.33	2.89 YES
L0004936	0	0.26110E-06	459797.0	3778594.9	500.0	3.70	2.33	2.89 YES
L0004937	0	0.26110E-06	459797.0	3778599.9	500.1	3.70	2.33	2.89 YES
L0004938	0	0.26110E-06	459797.1	3778604.9	500.3	3.70	2.33	2.89 YES
L0004939	0	0.26110E-06	459797.1	3778609.9	500.4	3.70	2.33	2.89 YES
L0004940	0	0.26110E-06	459797.1	3778614.9	500.6	3.70	2.33	2.89 YES
L0004941	0	0.26110E-06	459797.1	3778619.9	500.7	3.70	2.33	2.89 YES
L0004942	0	0.26110E-06	459797.2	3778624.9	500.8	3.70	2.33	2.89 YES
L0004943	0	0.26110E-06	459797.2	3778629.9	500.9	3.70	2.33	2.89 YES
L0004944	0	0.26110E-06	459797.2	3778634.9	501.0	3.70	2.33	2.89 YES
L0004945	0	0.26110E-06	459797.2	3778639.9	501.2	3.70	2.33	2.89 YES
L0004946	0	0.26110E-06	459797.3	3778644.9	501.3	3.70	2.33	2.89 YES
L0004947	0	0.26110E-06	459797.3	3778649.9	501.4	3.70	2.33	2.89 YES
L0004948	0	0.26110E-06	459797.3	3778654.9	501.5	3.70	2.33	2.89 YES
L0004949	0	0.26110E-06	459797.3	3778659.9	501.6	3.70	2.33	2.89 YES
L0004950	0	0.26110E-06	459797.4	3778664.9	501.7	3.70	2.33	2.89 YES
L0004951	0	0.26110E-06	459797.4	3778669.9	501.9	3.70	2.33	2.89 YES
L0004952	0	0.26110E-06	459797.4	3778674.9	502.0	3.70	2.33	2.89 YES
L0004953	0	0.26110E-06	459797.4	3778679.9	502.1	3.70	2.33	

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2.89     YES
 L0004954         0   0.26110E-06  459797.5 3778684.9   502.3     3.70     2.33
2.89     YES
 L0004955         0   0.26110E-06  459797.5 3778689.9   502.4     3.70     2.33
2.89     YES
 L0004956         0   0.26110E-06  459797.5 3778694.9   502.5     3.70     2.33
2.89     YES
 L0004957         0   0.26110E-06  459797.6 3778699.9   502.7     3.70     2.33
2.89     YES
 L0004958         0   0.26110E-06  459797.6 3778704.9   502.8     3.70     2.33
2.89     YES
 L0004959         0   0.26110E-06  459797.6 3778709.9   503.0     3.70     2.33
2.89     YES
 L0004960         0   0.26110E-06  459797.6 3778714.9   503.1     3.70     2.33
2.89     YES
 L0004961         0   0.26110E-06  459797.7 3778719.9   503.2     3.70     2.33
2.89     YES
 L0004962         0   0.26110E-06  459797.7 3778724.9   503.4     3.70     2.33
2.89     YES
 L0004963         0   0.26110E-06  459797.7 3778729.9   503.5     3.70     2.33
2.89     YES
 L0004964         0   0.26110E-06  459797.7 3778734.9   503.7     3.70     2.33
2.89     YES
 L0004965         0   0.26110E-06  459797.8 3778739.9   503.8     3.70     2.33
2.89     YES
 L0004966         0   0.26110E-06  459797.8 3778744.9   503.9     3.70     2.33
2.89     YES
 L0004967         0   0.26110E-06  459797.8 3778749.9   504.1     3.70     2.33
2.89     YES
 L0004968         0   0.26110E-06  459797.8 3778754.9   504.2     3.70     2.33
2.89     YES
 L0004969         0   0.26110E-06  459797.9 3778759.9   504.3     3.70     2.33
2.89     YES
 L0004970         0   0.26110E-06  459797.9 3778764.9   504.4     3.70     2.33
2.89     YES
 L0004971         0   0.26110E-06  459797.9 3778769.9   504.6     3.70     2.33
2.89     YES
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY	EMISSION RATE SCALAR
L0004972	0	0.26110E-06	459797.9	3778774.9	504.7	3.70	2.33	2.89	YES	
L0004973	0	0.26110E-06	459798.0	3778779.9	504.8	3.70	2.33	2.89	YES	
L0004974	0	0.26110E-06	459798.0	3778784.9	504.9	3.70	2.33	2.89	YES	
L0004975	0	0.26110E-06	459798.0	3778789.9	505.1	3.70	2.33	2.89	YES	
L0004976	0	0.26110E-06	459798.0	3778794.9	505.2	3.70	2.33	2.89	YES	
L0004977	0	0.26110E-06	459798.1	3778799.9	505.3	3.70	2.33	2.89	YES	
L0004978	0	0.26110E-06	459798.1	3778804.9	505.4	3.70	2.33	2.89	YES	
L0004979	0	0.26110E-06	459798.1	3778809.9	505.6	3.70	2.33	2.89	YES	
L0004980	0	0.26110E-06	459798.1	3778814.9	505.7	3.70	2.33	2.89	YES	
L0004981	0	0.26110E-06	459798.2	3778819.9	505.9	3.70	2.33	2.89	YES	
L0004982	0	0.26110E-06	459798.2	3778824.9	506.0	3.70	2.33	2.89	YES	
L0004983	0	0.26110E-06	459798.2	3778829.9	506.1	3.70	2.33	2.89	YES	
L0004984	0	0.26110E-06	459798.2	3778834.9	506.2	3.70	2.33	2.89	YES	
L0004985	0	0.26110E-06	459798.3	3778839.9	506.4	3.70	2.33	2.89	YES	
L0004986	0	0.26110E-06	459798.3	3778844.9	506.5	3.70	2.33	2.89	YES	
L0004987	0	0.26110E-06	459798.3	3778849.9	506.7	3.70	2.33	2.89	YES	
L0004988	0	0.26110E-06	459798.3	3778854.9	506.8	3.70	2.33	2.89	YES	
L0004989	0	0.26110E-06	459798.4	3778859.9	506.9	3.70	2.33	2.89	YES	
L0004990	0	0.26110E-06	459798.4	3778864.9	507.1	3.70	2.33	2.89	YES	
L0004991	0	0.26110E-06	459798.4	3778869.9	507.2	3.70	2.33			

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2.89     YES
 L0004992         0   0.26110E-06  459798.4 3778874.9   507.3     3.70     2.33
2.89     YES
 L0004993         0   0.26110E-06  459798.5 3778879.9   507.4     3.70     2.33
2.89     YES
 L0004994         0   0.26110E-06  459798.5 3778884.9   507.6     3.70     2.33
2.89     YES
 L0004995         0   0.26110E-06  459798.5 3778889.9   507.7     3.70     2.33
2.89     YES
 L0004996         0   0.26110E-06  459798.5 3778894.9   507.8     3.70     2.33
2.89     YES
 L0004997         0   0.26110E-06  459798.6 3778899.9   507.9     3.70     2.33
2.89     YES
 L0004998         0   0.26110E-06  459798.6 3778904.9   508.0     3.70     2.33
2.89     YES
 L0004999         0   0.26110E-06  459798.6 3778909.9   508.2     3.70     2.33
2.89     YES
 L0005000         0   0.26110E-06  459798.6 3778914.9   508.2     3.70     2.33
2.89     YES
 L0005001         0   0.26110E-06  459798.7 3778919.9   508.4     3.70     2.33
2.89     YES
 L0005002         0   0.26110E-06  459798.7 3778924.9   508.5     3.70     2.33
2.89     YES
 L0005003         0   0.26110E-06  459798.7 3778929.9   508.6     3.70     2.33
2.89     YES
 L0005004         0   0.26110E-06  459798.7 3778934.9   508.8     3.70     2.33
2.89     YES
 L0005005         0   0.26110E-06  459798.7 3778939.9   508.9     3.70     2.33
2.89     YES
 L0005006         0   0.26110E-06  459798.7 3778944.9   509.0     3.70     2.33
2.89     YES
 L0005007         0   0.26110E-06  459798.7 3778949.9   509.2     3.70     2.33
2.89     YES
 L0005008         0   0.26110E-06  459798.6 3778954.9   509.3     3.70     2.33
2.89     YES
 L0005009         0   0.26110E-06  459798.6 3778959.9   509.5     3.70     2.33
2.89     YES
 L0005010         0   0.26110E-06  459798.6 3778964.9   509.6     3.70     2.33
2.89     YES
 L0005011         0   0.26110E-06  459798.6 3778969.9   509.7     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. SCALAR VARY BY	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0005012	0	0.26110E-06	459798.6	3778974.9	509.9	3.70	2.33	2.89	YES
L0005013	0	0.26110E-06	459798.6	3778979.9	510.0	3.70	2.33	2.89	YES
L0005014	0	0.26110E-06	459798.6	3778984.9	510.2	3.70	2.33	2.89	YES
L0005015	0	0.26110E-06	459798.6	3778989.9	510.3	3.70	2.33	2.89	YES
L0005016	0	0.26110E-06	459798.6	3778994.9	510.4	3.70	2.33	2.89	YES
L0005017	0	0.26110E-06	459798.6	3778999.9	510.6	3.70	2.33	2.89	YES
L0005018	0	0.26110E-06	459798.6	3779004.9	510.7	3.70	2.33	2.89	YES
L0005019	0	0.26110E-06	459798.6	3779009.9	510.9	3.70	2.33	2.89	YES
L0005020	0	0.26110E-06	459798.6	3779014.9	511.0	3.70	2.33	2.89	YES
L0005021	0	0.26110E-06	459798.6	3779019.9	511.2	3.70	2.33	2.89	YES
L0005022	0	0.26110E-06	459798.6	3779024.9	511.3	3.70	2.33	2.89	YES
L0005023	0	0.26110E-06	459798.6	3779029.9	511.4	3.70	2.33	2.89	YES
L0005024	0	0.26110E-06	459798.6	3779034.9	511.6	3.70	2.33	2.89	YES
L0005025	0	0.26110E-06	459798.6	3779039.9	511.7	3.70	2.33	2.89	YES
L0005026	0	0.26110E-06	459798.6	3779044.9	511.9	3.70	2.33	2.89	YES
L0005027	0	0.26110E-06	459798.6	3779049.9	512.0	3.70	2.33	2.89	YES
L0005028	0	0.26110E-06	459798.6	3779054.9	512.2	3.70	2.33	2.89	YES
L0005029	0	0.26110E-06	459798.6	3779059.9	512.3	3.70	2.33		

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2.89     YES
 L0005030         0   0.26110E-06  459798.6 3779064.9   512.5     3.70     2.33
2.89     YES
 L0005031         0   0.26110E-06  459798.6 3779069.9   512.7     3.70     2.33
2.89     YES
 L0005032         0   0.26110E-06  459798.6 3779074.9   512.8     3.70     2.33
2.89     YES
 L0005033         0   0.26110E-06  459798.6 3779079.9   512.9     3.70     2.33
2.89     YES
 L0005034         0   0.26110E-06  459798.6 3779084.9   513.1     3.70     2.33
2.89     YES
 L0005035         0   0.26110E-06  459798.6 3779089.9   513.2     3.70     2.33
2.89     YES
 L0005036         0   0.26110E-06  459798.6 3779094.9   513.3     3.70     2.33
2.89     YES
 L0005037         0   0.26110E-06  459798.6 3779099.9   513.4     3.70     2.33
2.89     YES
 L0005038         0   0.26110E-06  459798.6 3779104.9   513.6     3.70     2.33
2.89     YES
 L0005039         0   0.26110E-06  459798.6 3779109.9   513.7     3.70     2.33
2.89     YES
 L0005040         0   0.26110E-06  459798.6 3779114.9   513.8     3.70     2.33
2.89     YES
 L0005041         0   0.26110E-06  459798.6 3779119.9   513.9     3.70     2.33
2.89     YES
 L0005042         0   0.26110E-06  459798.6 3779124.9   514.0     3.70     2.33
2.89     YES
 L0005043         0   0.26110E-06  459798.6 3779129.9   514.1     3.70     2.33
2.89     YES
 L0005044         0   0.26110E-06  459798.6 3779134.9   514.2     3.70     2.33
2.89     YES
 L0005045         0   0.26110E-06  459798.6 3779139.9   514.3     3.70     2.33
2.89     YES
 L0005046         0   0.26110E-06  459798.6 3779144.9   514.5     3.70     2.33
2.89     YES
 L0005047         0   0.26110E-06  459798.6 3779149.9   514.6     3.70     2.33
2.89     YES
 L0005048         0   0.26110E-06  459798.6 3779154.9   514.7     3.70     2.33
2.89     YES
 L0005049         0   0.26110E-06  459798.6 3779159.9   514.8     3.70     2.33
2.89     YES
 L0005050         0   0.26110E-06  459798.6 3779164.9   514.9     3.70     2.33
2.89     YES
 L0005051         0   0.26110E-06  459798.6 3779169.9   515.0     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0005052	0	0.26110E-06	459798.6	3779174.9	515.2	3.70	2.33	2.89	YES	
L0005053	0	0.26110E-06	459798.6	3779179.9	515.3	3.70	2.33	2.89	YES	
L0005054	0	0.26110E-06	459798.6	3779184.9	515.4	3.70	2.33	2.89	YES	
L0005055	0	0.26110E-06	459798.6	3779189.9	515.5	3.70	2.33	2.89	YES	
L0005056	0	0.26110E-06	459798.6	3779194.9	515.7	3.70	2.33	2.89	YES	
L0005057	0	0.26110E-06	459798.6	3779199.9	515.8	3.70	2.33	2.89	YES	
L0005058	0	0.26110E-06	459798.5	3779204.9	515.9	3.70	2.33	2.89	YES	
L0005059	0	0.26110E-06	459798.5	3779209.9	516.1	3.70	2.33	2.89	YES	
L0005060	0	0.26110E-06	459798.5	3779214.9	516.2	3.70	2.33	2.89	YES	
L0005061	0	0.26110E-06	459798.5	3779219.9	516.3	3.70	2.33	2.89	YES	
L0005062	0	0.26110E-06	459798.5	3779224.9	516.4	3.70	2.33	2.89	YES	
L0005063	0	0.26110E-06	459798.5	3779229.9	516.6	3.70	2.33	2.89	YES	
L0005064	0	0.26110E-06	459798.5	3779234.9	516.7	3.70	2.33	2.89	YES	
L0005065	0	0.26110E-06	459798.5	3779239.9	516.8	3.70	2.33	2.89	YES	
L0005066	0	0.26110E-06	459798.5	3779244.9	517.0	3.70	2.33	2.89	YES	
L0005067	0	0.26110E-06	459798.5	3779249.9	517.1	3.70	2.33			

2.89 YES							
L0005068	0	0.26110E-06	459798.5	3779254.9	517.2	3.70	2.33
2.89 YES							
L0005069	0	0.26110E-06	459798.5	3779259.9	517.4	3.70	2.33
2.89 YES							
L0005070	0	0.26110E-06	459798.5	3779264.9	517.5	3.70	2.33
2.89 YES							
L0005071	0	0.26110E-06	459798.5	3779269.9	517.6	3.70	2.33
2.89 YES							
L0005072	0	0.26110E-06	459798.5	3779274.9	517.8	3.70	2.33
2.89 YES							
L0005073	0	0.26110E-06	459798.5	3779279.9	517.9	3.70	2.33
2.89 YES							
L0005074	0	0.26110E-06	459798.5	3779284.9	518.1	3.70	2.33
2.89 YES							
L0005075	0	0.26110E-06	459798.5	3779289.9	518.2	3.70	2.33
2.89 YES							
L0005076	0	0.26110E-06	459798.5	3779294.9	518.3	3.70	2.33
2.89 YES							
L0005077	0	0.26110E-06	459798.5	3779299.9	518.5	3.70	2.33
2.89 YES							
L0005078	0	0.26110E-06	459798.5	3779304.9	518.7	3.70	2.33
2.89 YES							
L0005079	0	0.26110E-06	459798.5	3779309.9	518.8	3.70	2.33
2.89 YES							
L0005080	0	0.26110E-06	459798.5	3779314.9	519.0	3.70	2.33
2.89 YES							
L0005081	0	0.26110E-06	459798.5	3779319.9	519.1	3.70	2.33
2.89 YES							
L0005082	0	0.26110E-06	459798.5	3779324.9	519.3	3.70	2.33
2.89 YES							
L0005083	0	0.26110E-06	459798.5	3779329.9	519.4	3.70	2.33
2.89 YES							
L0005084	0	0.26110E-06	459798.5	3779334.9	519.5	3.70	2.33
2.89 YES							
L0005085	0	0.26110E-06	459798.5	3779339.9	519.7	3.70	2.33
2.89 YES							
L0005086	0	0.26110E-06	459798.5	3779344.9	519.8	3.70	2.33
2.89 YES							
L0005087	0	0.26110E-06	459798.5	3779349.9	520.0	3.70	2.33
2.89 YES							
L0005088	0	0.26110E-06	459798.5	3779354.9	520.1	3.70	2.33
2.89 YES							
L0005089	0	0.26110E-06	459798.5	3779359.9	520.2	3.70	2.33
2.89 YES							
L0005090	0	0.26110E-06	459798.5	3779364.9	520.3	3.70	2.33
2.89 YES							
L0005091	0	0.26110E-06	459798.5	3779369.9	520.4	3.70	2.33

2.89 YES
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 05/27/20
*** AERMET - VERSION 16216 *** ***
*** 10:59:05

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0005092	0	0.26110E-06	459798.5	3779374.9	520.6	3.70	2.33	2.89	YES	
L0005093	0	0.26110E-06	459798.5	3779379.9	520.7	3.70	2.33	2.89	YES	
L0005094	0	0.26110E-06	459798.5	3779384.9	520.8	3.70	2.33	2.89	YES	
L0005095	0	0.26110E-06	459798.5	3779389.9	520.9	3.70	2.33	2.89	YES	
L0005096	0	0.26110E-06	459798.5	3779394.9	521.1	3.70	2.33	2.89	YES	
L0005097	0	0.26110E-06	459798.5	3779399.9	521.2	3.70	2.33	2.89	YES	
L0005098	0	0.26110E-06	459798.5	3779404.9	521.3	3.70	2.33	2.89	YES	
L0005099	0	0.26110E-06	459798.5	3779409.9	521.4	3.70	2.33	2.89	YES	
L0005100	0	0.26110E-06	459798.5	3779414.9	521.6	3.70	2.33	2.89	YES	
L0005101	0	0.26110E-06	459798.5	3779419.9	521.7	3.70	2.33	2.89	YES	
L0005102	0	0.26110E-06	459798.5	3779424.9	521.9	3.70	2.33	2.89	YES	
L0005103	0	0.26110E-06	459798.5	3779429.9	522.0	3.70	2.33	2.89	YES	
L0005104	0	0.26110E-06	459798.5	3779434.9	522.1	3.70	2.33	2.89	YES	
L0005105	0	0.26110E-06	459798.5	3779439.9	522.3	3.70	2.33			

2.89	YES						
L0005106	0	0.26110E-06	459798.5	3779444.9	522.4	3.70	2.33
2.89	YES						
L0005107	0	0.26110E-06	459798.5	3779449.9	522.5	3.70	2.33
2.89	YES						
L0005108	0	0.26110E-06	459798.4	3779454.9	522.7	3.70	2.33
2.89	YES						
L0005109	0	0.26110E-06	459798.4	3779459.9	522.8	3.70	2.33
2.89	YES						
L0005110	0	0.26110E-06	459798.4	3779464.9	523.0	3.70	2.33
2.89	YES						
L0005111	0	0.26110E-06	459798.4	3779469.9	523.1	3.70	2.33
2.89	YES						
L0005112	0	0.26110E-06	459798.4	3779474.9	523.3	3.70	2.33
2.89	YES						
L0005113	0	0.26110E-06	459798.4	3779479.9	523.4	3.70	2.33
2.89	YES						
L0005114	0	0.26110E-06	459798.4	3779484.9	523.5	3.70	2.33
2.89	YES						
L0005115	0	0.26110E-06	459798.4	3779489.9	523.7	3.70	2.33
2.89	YES						
L0005116	0	0.26110E-06	459798.4	3779494.9	523.8	3.70	2.33
2.89	YES						
L0005117	0	0.26110E-06	459798.4	3779499.9	524.0	3.70	2.33
2.89	YES						
L0005118	0	0.26110E-06	459798.4	3779504.9	524.1	3.70	2.33
2.89	YES						
L0005119	0	0.26110E-06	459798.4	3779509.9	524.2	3.70	2.33
2.89	YES						
L0005120	0	0.26110E-06	459798.4	3779514.9	524.4	3.70	2.33
2.89	YES						
L0005121	0	0.26110E-06	459798.4	3779519.9	524.5	3.70	2.33
2.89	YES						
L0005122	0	0.26110E-06	459798.4	3779524.9	524.7	3.70	2.33
2.89	YES						
L0005123	0	0.26110E-06	459798.4	3779529.9	524.8	3.70	2.33
2.89	YES						
L0005124	0	0.26110E-06	459798.4	3779534.9	524.9	3.70	2.33
2.89	YES						
L0005125	0	0.26110E-06	459798.4	3779539.9	525.1	3.70	2.33
2.89	YES						
L0005126	0	0.26110E-06	459798.4	3779544.9	525.2	3.70	2.33
2.89	YES						
L0005127	0	0.26110E-06	459798.4	3779549.9	525.4	3.70	2.33
2.89	YES						
L0005128	0	0.26110E-06	459798.4	3779554.9	525.5	3.70	2.33
2.89	YES						
L0005129	0	0.26110E-06	459798.4	3779559.9	525.7	3.70	2.33

2.89 YES
L0005130 0 0.26110E-06 459798.4 3779564.9 525.8 3.70 2.33
2.89 YES
L0005131 0 0.26110E-06 459798.4 3779569.9 526.0 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0005132	0	0.26110E-06	459798.4	3779574.9	526.1	3.70	2.33	2.89	YES	
L0005133	0	0.26110E-06	459798.4	3779579.9	526.2	3.70	2.33	2.89	YES	
L0005134	0	0.26110E-06	459798.4	3779584.9	526.4	3.70	2.33	2.89	YES	
L0005135	0	0.26110E-06	459798.4	3779589.9	526.5	3.70	2.33	2.89	YES	
L0005136	0	0.26110E-06	459798.4	3779594.9	526.7	3.70	2.33	2.89	YES	
L0005137	0	0.26110E-06	459798.4	3779599.9	526.8	3.70	2.33	2.89	YES	
L0005138	0	0.26110E-06	459798.4	3779604.9	527.0	3.70	2.33	2.89	YES	
L0005139	0	0.26110E-06	459798.4	3779609.9	527.1	3.70	2.33	2.89	YES	
L0005140	0	0.26110E-06	459798.4	3779614.9	527.3	3.70	2.33	2.89	YES	
L0005141	0	0.26110E-06	459798.4	3779619.9	527.4	3.70	2.33	2.89	YES	
L0005142	0	0.26110E-06	459798.4	3779624.9	527.6	3.70	2.33	2.89	YES	
L0005143	0	0.26110E-06	459798.4	3779629.9	527.7	3.70	2.33			

2.89 YES							
L0005144	0	0.26110E-06	459798.4	3779634.9	527.9	3.70	2.33
2.89 YES							
L0005145	0	0.26110E-06	459798.4	3779639.9	528.1	3.70	2.33
2.89 YES							
L0005146	0	0.26110E-06	459798.4	3779644.9	528.2	3.70	2.33
2.89 YES							
L0005147	0	0.26110E-06	459798.4	3779649.9	528.4	3.70	2.33
2.89 YES							
L0005148	0	0.26110E-06	459798.4	3779654.9	528.5	3.70	2.33
2.89 YES							
L0005149	0	0.26110E-06	459798.4	3779659.9	528.7	3.70	2.33
2.89 YES							
L0005150	0	0.26110E-06	459798.4	3779664.9	528.9	3.70	2.33
2.89 YES							
L0005151	0	0.26110E-06	459798.4	3779669.9	529.0	3.70	2.33
2.89 YES							
L0005152	0	0.26110E-06	459798.4	3779674.9	529.2	3.70	2.33
2.89 YES							
L0005153	0	0.26110E-06	459798.4	3779679.9	529.3	3.70	2.33
2.89 YES							
L0005154	0	0.26110E-06	459798.4	3779684.9	529.5	3.70	2.33
2.89 YES							
L0005155	0	0.26110E-06	459798.4	3779689.9	529.7	3.70	2.33
2.89 YES							
L0005156	0	0.26110E-06	459798.4	3779694.9	529.8	3.70	2.33
2.89 YES							
L0005157	0	0.26110E-06	459798.4	3779699.9	530.0	3.70	2.33
2.89 YES							
L0005158	0	0.26110E-06	459798.3	3779704.9	530.2	3.70	2.33
2.89 YES							
L0005159	0	0.26110E-06	459798.3	3779709.9	530.3	3.70	2.33
2.89 YES							
L0005160	0	0.26110E-06	459798.3	3779714.9	530.5	3.70	2.33
2.89 YES							
L0005161	0	0.26110E-06	459798.3	3779719.9	530.7	3.70	2.33
2.89 YES							
L0005162	0	0.26110E-06	459798.3	3779724.9	530.8	3.70	2.33
2.89 YES							
L0005163	0	0.26110E-06	459798.3	3779729.9	530.9	3.70	2.33
2.89 YES							
L0005164	0	0.26110E-06	459798.3	3779734.9	531.1	3.70	2.33
2.89 YES							
L0005165	0	0.26110E-06	459798.3	3779739.9	531.2	3.70	2.33
2.89 YES							
L0005166	0	0.35890E-06	459803.7	3779743.4	531.3	3.70	2.33
2.89 YES							
L0005167	0	0.35890E-06	459808.7	3779743.3	531.3	3.70	2.33

2.89 YES
L0005168 0 0.35890E-06 459813.7 3779743.3 531.3 3.70 2.33
2.89 YES
L0005169 0 0.35890E-06 459818.7 3779743.3 531.3 3.70 2.33
2.89 YES
L0005170 0 0.35890E-06 459823.7 3779743.2 531.3 3.70 2.33
2.89 YES
L0005171 0 0.35890E-06 459828.7 3779743.2 531.4 3.70 2.33
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0005172	0	0.35890E-06	459833.7	3779743.2	531.4	3.70	2.33	2.89	YES	
L0005173	0	0.35890E-06	459838.7	3779743.2	531.4	3.70	2.33	2.89	YES	
L0005174	0	0.35890E-06	459843.7	3779743.1	531.4	3.70	2.33	2.89	YES	
L0005175	0	0.35890E-06	459848.7	3779743.1	531.3	3.70	2.33	2.89	YES	
L0005176	0	0.35890E-06	459853.7	3779743.1	531.3	3.70	2.33	2.89	YES	
L0005177	0	0.35890E-06	459858.7	3779743.0	531.3	3.70	2.33	2.89	YES	
L0005178	0	0.35890E-06	459863.7	3779743.0	531.2	3.70	2.33	2.89	YES	
L0005179	0	0.35890E-06	459868.7	3779743.0	531.2	3.70	2.33	2.89	YES	
L0005180	0	0.35890E-06	459873.7	3779742.9	531.2	3.70	2.33	2.89	YES	
L0005181	0	0.35890E-06	459878.7	3779742.9	531.2	3.70	2.33			

2.89 YES							
L0005182	0	0.35890E-06	459883.7	3779742.9	531.2	3.70	2.33
2.89 YES							
L0005183	0	0.35890E-06	459888.7	3779742.8	531.2	3.70	2.33
2.89 YES							
L0005184	0	0.35890E-06	459893.7	3779742.8	531.2	3.70	2.33
2.89 YES							
L0005185	0	0.17640E-06	459898.0	3779743.1	531.2	3.70	2.33
2.89 YES							
L0005186	0	0.17640E-06	459903.0	3779743.1	531.2	3.70	2.33
2.89 YES							
L0005187	0	0.17640E-06	459908.0	3779743.0	531.3	3.70	2.33
2.89 YES							
L0005188	0	0.17640E-06	459913.0	3779743.0	531.3	3.70	2.33
2.89 YES							
L0005189	0	0.17640E-06	459918.0	3779743.0	531.3	3.70	2.33
2.89 YES							
L0005190	0	0.17640E-06	459923.0	3779743.0	531.3	3.70	2.33
2.89 YES							
L0005191	0	0.17640E-06	459928.0	3779743.0	531.3	3.70	2.33
2.89 YES							
L0005192	0	0.17640E-06	459933.0	3779742.9	531.3	3.70	2.33
2.89 YES							
L0005193	0	0.17640E-06	459938.0	3779742.9	531.3	3.70	2.33
2.89 YES							
L0005194	0	0.17640E-06	459943.0	3779742.9	531.4	3.70	2.33
2.89 YES							
L0005195	0	0.17640E-06	459948.0	3779742.9	531.4	3.70	2.33
2.89 YES							
L0005196	0	0.17640E-06	459953.0	3779742.8	531.4	3.70	2.33
2.89 YES							
L0005197	0	0.17640E-06	459958.0	3779742.8	531.4	3.70	2.33
2.89 YES							
L0005198	0	0.17640E-06	459963.0	3779742.8	531.4	3.70	2.33
2.89 YES							
L0005199	0	0.17640E-06	459968.0	3779742.8	531.4	3.70	2.33
2.89 YES							
L0005200	0	0.17640E-06	459973.0	3779742.7	531.4	3.70	2.33
2.89 YES							
L0005201	0	0.17640E-06	459978.0	3779742.7	531.4	3.70	2.33
2.89 YES							
L0005202	0	0.17640E-06	459983.0	3779742.7	531.4	3.70	2.33
2.89 YES							
L0005203	0	0.17640E-06	459988.0	3779742.7	531.4	3.70	2.33
2.89 YES							
L0005204	0	0.17640E-06	459993.0	3779742.6	531.4	3.70	2.33
2.89 YES							
L0005205	0	0.17640E-06	459998.0	3779742.6	531.4	3.70	2.33

```
2.89     YES
 L0005206         0   0.17640E-06  460003.0 3779742.6   531.4     3.70     2.33
2.89     YES
 L0005207         0   0.17640E-06  460008.0 3779742.6   531.4     3.70     2.33
2.89     YES
 L0005208         0   0.17640E-06  460013.0 3779742.6   531.4     3.70     2.33
2.89     YES
 L0005209         0   0.17640E-06  460018.0 3779742.5   531.4     3.70     2.33
2.89     YES
 L0005210         0   0.17640E-06  460023.0 3779742.5   531.3     3.70     2.33
2.89     YES
 L0005211         0   0.17640E-06  460028.0 3779742.5   531.3     3.70     2.33
2.89     YES
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0005212	0	0.17640E-06	460033.0	3779742.5	531.3	3.70	2.33	2.89	YES	
L0005213	0	0.17640E-06	460038.0	3779742.4	531.3	3.70	2.33	2.89	YES	
L0005214	0	0.17640E-06	460043.0	3779742.4	531.2	3.70	2.33	2.89	YES	
L0005215	0	0.17640E-06	460048.0	3779742.4	531.2	3.70	2.33	2.89	YES	
L0005216	0	0.17640E-06	460053.0	3779742.4	531.1	3.70	2.33	2.89	YES	
L0005217	0	0.17640E-06	460058.0	3779742.3	531.1	3.70	2.33	2.89	YES	
L0005218	0	0.17640E-06	460063.0	3779742.3	531.0	3.70	2.33	2.89	YES	
L0005219	0	0.17640E-06	460068.0	3779742.3	531.0	3.70	2.33	2.89	YES	

2.89	YES							
L0005220		0	0.17640E-06	460073.0	3779742.3	530.9	3.70	2.33
2.89	YES							
L0005221		0	0.17640E-06	460078.0	3779742.3	530.8	3.70	2.33
2.89	YES							
L0005222		0	0.17640E-06	460083.0	3779742.2	530.7	3.70	2.33
2.89	YES							
L0005223		0	0.17640E-06	460088.0	3779742.2	530.6	3.70	2.33
2.89	YES							
L0005224		0	0.99230E-07	459893.7	3779748.0	531.3	3.70	1.67
2.89	YES							
L0005225		0	0.99230E-07	459893.7	3779751.6	531.4	3.70	1.67
2.89	YES							
L0005226		0	0.99230E-07	459893.7	3779755.2	531.5	3.70	1.67
2.89	YES							
L0005227		0	0.99230E-07	459893.7	3779758.8	531.6	3.70	1.67
2.89	YES							
L0005228		0	0.99230E-07	459893.7	3779762.4	531.7	3.70	1.67
2.89	YES							
L0005229		0	0.99230E-07	459893.7	3779766.0	531.8	3.70	1.67
2.89	YES							
L0005230		0	0.99230E-07	459893.7	3779769.6	531.9	3.70	1.67
2.89	YES							
L0005231		0	0.99230E-07	459893.7	3779773.2	532.0	3.70	1.67
2.89	YES							
L0005232		0	0.99230E-07	459893.7	3779776.8	532.1	3.70	1.67
2.89	YES							
L0005233		0	0.99230E-07	459893.7	3779780.4	532.1	3.70	1.67
2.89	YES							
L0005234		0	0.99230E-07	459893.7	3779784.0	532.2	3.70	1.67
2.89	YES							
L0005235		0	0.99230E-07	459893.7	3779787.6	532.3	3.70	1.67
2.89	YES							
L0005236		0	0.99230E-07	459893.7	3779791.2	532.4	3.70	1.67
2.89	YES							
L0005237		0	0.94350E-07	460090.7	3779746.5	530.7	3.70	1.67
2.89	YES							
L0005238		0	0.94350E-07	460090.6	3779750.1	530.8	3.70	1.67
2.89	YES							
L0005239		0	0.94350E-07	460090.4	3779753.7	530.9	3.70	1.67
2.89	YES							
L0005240		0	0.94350E-07	460090.3	3779757.3	530.9	3.70	1.67
2.89	YES							
L0005241		0	0.94350E-07	460090.1	3779760.9	531.0	3.70	1.67
2.89	YES							
L0005242		0	0.94350E-07	460089.7	3779764.5	531.1	3.70	1.67
2.89	YES							
L0005243		0	0.94350E-07	460089.2	3779768.0	531.2	3.70	1.67

```
2.89     YES
 L0005244         0   0.94350E-07  460088.6 3779771.6   531.3     3.70     1.67
2.89     YES
 L0005245         0   0.94350E-07  460088.1 3779775.1   531.4     3.70     1.67
2.89     YES
 L0005246         0   0.94350E-07  460087.5 3779778.7   531.4     3.70     1.67
2.89     YES
 L0005247         0   0.94350E-07  460086.8 3779782.2   531.5     3.70     1.67
2.89     YES
 L0005248         0   0.94350E-07  460084.3 3779784.8   531.6     3.70     1.67
2.89     YES
 L0005249         0   0.94350E-07  460081.9 3779787.4   531.7     3.70     1.67
2.89     YES
 L0005250         0   0.94350E-07  460079.4 3779790.1   531.8     3.70     1.67
2.89     YES
 L0005251         0   0.94350E-07  460076.8 3779792.5   531.9     3.70     1.67
2.89     YES
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0005252	0	0.94350E-07	460073.5	3779793.9	531.9	3.70	1.67	2.89	YES	
L0005253	0	0.94350E-07	460070.2	3779795.3	532.0	3.70	1.67	2.89	YES	
L0005254	0	0.94350E-07	460066.8	3779796.5	532.0	3.70	1.67	2.89	YES	
L0005255	0	0.94350E-07	460063.3	3779797.2	532.1	3.70	1.67	2.89	YES	
L0005256	0	0.94350E-07	460059.7	3779797.7	532.1	3.70	1.67	2.89	YES	
L0005257	0	0.94350E-07	460056.1	3779797.9	532.2	3.70	1.67			

2.89	YES						
L0005258	0	0.94350E-07	460052.6	3779798.2	532.2	3.70	1.67
2.89	YES						
L0005259	0	0.94350E-07	460049.0	3779798.4	532.2	3.70	1.67
2.89	YES						
L0005260	0	0.17390E-06	459887.2	3779829.5	533.5	3.70	1.67
2.89	YES						
L0005261	0	0.17390E-06	459890.8	3779829.4	533.5	3.70	1.67
2.89	YES						
L0005262	0	0.17390E-06	459894.4	3779829.4	533.5	3.70	1.67
2.89	YES						
L0005263	0	0.17390E-06	459898.0	3779829.4	533.6	3.70	1.67
2.89	YES						
L0005264	0	0.17390E-06	459901.6	3779829.4	533.6	3.70	1.67
2.89	YES						
L0005265	0	0.17390E-06	459905.2	3779829.4	533.6	3.70	1.67
2.89	YES						
L0005266	0	0.17390E-06	459908.8	3779829.3	533.7	3.70	1.67
2.89	YES						
L0005267	0	0.17390E-06	459912.4	3779829.3	533.7	3.70	1.67
2.89	YES						
L0005268	0	0.17390E-06	459916.0	3779829.3	533.7	3.70	1.67
2.89	YES						
L0005269	0	0.17390E-06	459919.6	3779829.3	533.7	3.70	1.67
2.89	YES						
L0005270	0	0.17390E-06	459923.2	3779829.2	533.7	3.70	1.67
2.89	YES						
L0005271	0	0.17390E-06	459926.8	3779829.2	533.7	3.70	1.67
2.89	YES						
L0005272	0	0.17390E-06	459930.4	3779829.2	533.7	3.70	1.67
2.89	YES						
L0005273	0	0.17390E-06	459934.0	3779829.2	533.7	3.70	1.67
2.89	YES						
L0005274	0	0.17390E-06	459937.6	3779829.2	533.7	3.70	1.67
2.89	YES						
L0005275	0	0.17390E-06	459941.2	3779829.1	533.7	3.70	1.67
2.89	YES						
L0005276	0	0.17390E-06	459944.8	3779829.1	533.7	3.70	1.67
2.89	YES						
L0005277	0	0.17390E-06	459948.4	3779829.1	533.7	3.70	1.67
2.89	YES						
L0005278	0	0.17390E-06	459952.0	3779829.1	533.7	3.70	1.67
2.89	YES						
L0005279	0	0.17390E-06	459955.6	3779829.0	533.7	3.70	1.67
2.89	YES						
L0005280	0	0.17390E-06	459959.2	3779829.0	533.7	3.70	1.67
2.89	YES						
L0005281	0	0.17390E-06	459962.8	3779829.0	533.7	3.70	1.67

2.89 YES
L0005282 0 0.17390E-06 459966.4 3779829.0 533.7 3.70 1.67
2.89 YES
L0005283 0 0.17390E-06 459970.0 3779829.0 533.7 3.70 1.67
2.89 YES
L0005284 0 0.17390E-06 459973.6 3779828.9 533.7 3.70 1.67
2.89 YES
L0005285 0 0.17390E-06 459977.2 3779828.9 533.7 3.70 1.67
2.89 YES
L0005286 0 0.17390E-06 459980.8 3779828.9 533.7 3.70 1.67
2.89 YES
L0005287 0 0.17390E-06 459984.4 3779828.9 533.7 3.70 1.67
2.89 YES
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2.89 YES
L0005289 0 0.17390E-06 459991.6 3779828.8 533.6 3.70 1.67
2.89 YES
L0005290 0 0.17390E-06 459995.2 3779828.8 533.6 3.70 1.67
2.89 YES
L0005291 0 0.17390E-06 459998.8 3779828.8 533.6 3.70 1.67
2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE VARY BY
L0005292	0	0.17390E-06	460002.4	3779828.8	533.5	3.70	1.67	2.89	YES	
L0005293	0	0.17390E-06	460006.0	3779828.7	533.5	3.70	1.67	2.89	YES	
L0005294	0	0.17390E-06	460009.6	3779828.7	533.5	3.70	1.67	2.89	YES	
L0005295	0	0.17390E-06	460013.2	3779828.7	533.4	3.70	1.67			

```
2.89     YES
 L0005296         0   0.17390E-06  460016.8 3779828.7   533.4     3.70     1.67
2.89     YES
 L0005297         0   0.17390E-06  460020.4 3779828.7   533.4     3.70     1.67
2.89     YES
 L0005298         0   0.17390E-06  460024.0 3779828.6   533.3     3.70     1.67
2.89     YES
 L0005299         0   0.17390E-06  460027.6 3779828.6   533.2     3.70     1.67
2.89     YES
 L0005300         0   0.17390E-06  460031.2 3779828.6   533.2     3.70     1.67
2.89     YES
 L0005301         0   0.17390E-06  460034.8 3779828.6   533.1     3.70     1.67
2.89     YES
 L0005302         0   0.17390E-06  460038.4 3779828.6   533.0     3.70     1.67
2.89     YES
 L0005303         0   0.17390E-06  460042.0 3779828.5   533.0     3.70     1.67
2.89     YES
 L0005304         0   0.17390E-06  460045.6 3779828.5   532.9     3.70     1.67
2.89     YES
 L0005305         0   0.17390E-06  460049.2 3779828.5   532.9     3.70     1.67
2.89     YES
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Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

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*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 05/27/20
*** AERMET - VERSION 16216 *** ***
*** 10:59:05

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0005129    , L0005130    , L0005131    ,
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

                                   PAGE  37
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                          SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
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                                  PAGE  41
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                     *** SOURCE IDs DEFINED AS URBAN SOURCES
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URBAN ID	URBAN POP	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0005292 , L0005293 , L0005294 , L0005295 , L0005296 ,
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*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

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(460304.1, 3779784.8, 530.5, 530.5, 0.0); (460204.1,
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(460254.1, 3780034.8, 538.3, 538.3, 0.0); (460304.1,
3780034.8, 537.9, 537.9, 0.0);
(460204.1, 3780084.8, 540.4, 540.4, 0.0); (460254.1,
3780084.8, 539.8, 539.8, 0.0);
(460304.1, 3780084.8, 539.5, 539.5, 0.0); (460204.1,
3780134.8, 541.7, 541.7, 0.0);
(460254.1, 3780134.8, 540.8, 540.8, 0.0); (460304.1,
3780134.8, 540.5, 540.5, 0.0);
(460204.1, 3780184.8, 542.8, 542.8, 0.0); (460254.1,
3780184.8, 542.1, 542.1, 0.0);
(460304.1, 3780184.8, 542.5, 542.5, 0.0); (460204.1,
3780234.8, 544.2, 544.2, 0.0);
(460254.1, 3780234.8, 543.3, 543.3, 0.0); (460304.1,
3780234.8, 543.2, 543.2, 0.0);
(460204.1, 3780284.8, 546.0, 546.0, 0.0); (460254.1,
3780284.8, 545.6, 545.6, 0.0);
(460304.1, 3780284.8, 545.5, 545.5, 0.0); (460204.1,
3780334.8, 547.3, 547.3, 0.0);

     (460254.1, 3780334.8,   546.9,   546.9,   0.0);   (460304.1,
3780334.8,   546.9,   546.9,   0.0);
     (460204.1, 3780384.8,   548.7,   548.7,   0.0);   (460254.1,
3780384.8,   548.0,   548.0,   0.0);
     (460304.1, 3780384.8,   547.9,   547.9,   0.0);   (460204.1,
3780434.8,   549.9,   549.9,   0.0);
     (460254.1, 3780434.8,   549.7,   549.7,   0.0);   (460304.1,
3780434.8,   549.6,   549.6,   0.0);
     (460204.1, 3780484.8,   551.2,   551.2,   0.0);   (460254.1,
3780484.8,   550.5,   550.5,   0.0);
     (460304.1, 3780484.8,   550.3,   550.3,   0.0);   (460204.1,
3780534.8,   553.2,   553.2,   0.0);
     (460254.1, 3780534.8,   553.4,   553.4,   0.0);   (460304.1,
3780534.8,   553.0,   553.0,   0.0);
     (460054.1, 3780584.8,   554.8,   554.8,   0.0);   (460104.1,
3780584.8,   555.1,   555.1,   0.0);
     (460204.1, 3780584.8,   554.5,   554.5,   0.0);   (460254.1,
3780584.8,   554.5,   554.5,   0.0);
     (460304.1, 3780584.8,   554.3,   554.3,   0.0);   (460054.1,
3780634.8,   556.1,   556.1,   0.0);
     (460104.1, 3780634.8,   556.3,   556.3,   0.0);   (460204.1,
3780634.8,   556.2,   556.2,   0.0);
     (460254.1, 3780634.8,   556.5,   556.5,   0.0);   (460304.1,
3780634.8,   555.9,   555.9,   0.0);
     (459854.1, 3780684.8,   558.7,   558.7,   0.0);   (459904.1,
3780684.8,   558.7,   558.7,   0.0);
     (459954.1, 3780684.8,   558.4,   558.4,   0.0);   (460004.1,
3780684.8,   557.5,   557.5,   0.0);
     (460054.1, 3780684.8,   557.2,   557.2,   0.0);   (460104.1,
3780684.8,   557.5,   557.5,   0.0);
     (460204.1, 3780684.8,   557.6,   557.6,   0.0);   (460254.1,
3780684.8,   557.6,   557.6,   0.0);
     (460304.1, 3780684.8,   557.4,   557.4,   0.0);   (459854.1,
3780734.8,   560.4,   560.4,   0.0);
     (459904.1, 3780734.8,   560.5,   560.5,   0.0);   (459954.1,
3780734.8,   560.0,   560.0,   0.0);
     (460004.1, 3780734.8,   558.4,   558.4,   0.0);   (460054.1,
3780734.8,   558.5,   558.5,   0.0);
     (460104.1, 3780734.8,   559.1,   559.1,   0.0);   (460204.1,
3780734.8,   558.8,   558.8,   0.0);
     (460254.1, 3780734.8,   558.5,   558.5,   0.0);   (460304.1,
3780734.8,   558.2,   558.2,   0.0);
     (459854.1, 3780784.8,   562.1,   562.1,   0.0);   (459904.1,
3780784.8,   561.9,   561.9,   0.0);
     (459954.1, 3780784.8,   561.5,   561.5,   0.0);   (460004.1,
3780784.8,   561.3,   561.3,   0.0);
     (460054.1, 3780784.8,   560.6,   560.6,   0.0);   (460104.1,
3780784.8,   560.7,   560.7,   0.0);

(460204.1, 3780784.8, 560.7, 560.7, 0.0); (460254.1, 3780784.8, 560.2, 560.2, 0.0);
(460304.1, 3780784.8, 559.6, 559.6, 0.0); (459854.1, 3780834.8, 563.7, 563.7, 0.0);
(459904.1, 3780834.8, 563.5, 563.5, 0.0); (459954.1, 3780834.8, 563.0, 563.0, 0.0);
(460004.1, 3780834.8, 562.8, 562.8, 0.0); (460054.1, 3780834.8, 562.2, 562.2, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(460104.1, 3780834.8, 562.4, 562.4, 0.0); (460204.1, 3780834.8, 562.2, 562.2, 0.0);
(460254.1, 3780834.8, 561.5, 561.5, 0.0); (460304.1, 3780834.8, 561.6, 561.6, 0.0);
(459854.1, 3780884.8, 564.9, 564.9, 0.0); (459904.1, 3780884.8, 564.8, 564.8, 0.0);
(459954.1, 3780884.8, 564.6, 564.6, 0.0); (460004.1, 3780884.8, 564.3, 564.3, 0.0);
(460054.1, 3780884.8, 563.8, 563.8, 0.0); (460104.1, 3780884.8, 564.1, 564.1, 0.0);
(460204.1, 3780884.8, 563.7, 563.7, 0.0); (460254.1, 3780884.8, 563.3, 563.3, 0.0);
(460304.1, 3780884.8, 563.1, 563.1, 0.0); (459854.1, 3780984.8, 569.3, 569.3, 0.0);
(459904.1, 3780984.8, 568.4, 568.4, 0.0); (459954.1, 3780984.8, 566.8, 566.8, 0.0);
(460004.1, 3780984.8, 567.3, 567.3, 0.0); (460054.1, 3780984.8, 566.6, 566.6, 0.0);
(460104.1, 3780984.8, 567.0, 567.0, 0.0); (460204.1, 3780984.8, 566.2, 566.2, 0.0);
(460254.1, 3780984.8, 564.9, 564.9, 0.0); (460304.1, 3780984.8, 564.3, 564.3, 0.0);
(459854.1, 3781034.8, 570.0, 570.0, 0.0); (459904.1, 3781034.8, 569.8, 569.8, 0.0);
(459954.1, 3781034.8, 568.6, 568.6, 0.0); (460004.1, 3781034.8, 568.8, 568.8, 0.0);
(460054.1, 3781034.8, 568.3, 568.3, 0.0); (460104.1, 3781034.8, 568.6, 568.6, 0.0);

     (460204.1, 3781034.8,   567.9,   567.9,   0.0);   (460254.1,
3781034.8,   567.1,   567.1,   0.0);
     (460304.1, 3781034.8,   567.0,   567.0,   0.0);   (459854.1,
3781084.8,   572.0,   572.0,   0.0);
     (459904.1, 3781084.8,   571.7,   571.7,   0.0);   (459954.1,
3781084.8,   570.5,   570.5,   0.0);
     (460004.1, 3781084.8,   570.5,   570.5,   0.0);   (460054.1,
3781084.8,   570.2,   570.2,   0.0);
     (460104.1, 3781084.8,   570.3,   570.3,   0.0);   (460204.1,
3781084.8,   569.5,   569.5,   0.0);
     (460254.1, 3781084.8,   569.1,   569.1,   0.0);   (460304.1,
3781084.8,   569.0,   569.0,   0.0);
     (459854.1, 3781134.8,   573.5,   573.5,   0.0);   (459904.1,
3781134.8,   573.3,   573.3,   0.0);
     (459954.1, 3781134.8,   572.2,   572.2,   0.0);   (460004.1,
3781134.8,   572.2,   572.2,   0.0);
     (460054.1, 3781134.8,   571.5,   571.5,   0.0);   (460104.1,
3781134.8,   571.7,   571.7,   0.0);
     (460204.1, 3781134.8,   571.4,   571.4,   0.0);   (460254.1,
3781134.8,   570.6,   570.6,   0.0);
     (460304.1, 3781134.8,   570.0,   570.0,   0.0);   (459854.1,
3781184.8,   573.8,   573.8,   0.0);
     (459904.1, 3781184.8,   573.9,   573.9,   0.0);   (459954.1,
3781184.8,   573.4,   573.4,   0.0);
     (460004.1, 3781184.8,   573.8,   573.8,   0.0);   (460054.1,
3781184.8,   573.2,   573.2,   0.0);
     (460104.1, 3781184.8,   573.5,   573.5,   0.0);   (460204.1,
3781184.8,   572.6,   572.6,   0.0);
     (460254.1, 3781184.8,   572.2,   572.2,   0.0);   (460304.1,
3781184.8,   572.9,   572.9,   0.0);
     (459854.1, 3781234.8,   573.8,   783.1,   0.0);   (459904.1,
3781234.8,   574.1,   574.1,   0.0);
     (459954.1, 3781234.8,   574.8,   574.8,   0.0);   (460004.1,
3781234.8,   575.9,   575.9,   0.0);
     (460054.1, 3781234.8,   575.1,   575.1,   0.0);   (460104.1,
3781234.8,   575.6,   575.6,   0.0);
     (460204.1, 3781234.8,   574.6,   574.6,   0.0);   (460254.1,
3781234.8,   574.2,   574.2,   0.0);
     (460304.1, 3781234.8,   574.0,   574.0,   0.0);   (459854.1,
3781284.8,   574.0,   785.2,   0.0);
     (459904.1, 3781284.8,   574.0,   785.2,   0.0);   (459954.1,
3781284.8,   575.8,   575.8,   0.0);
     (460004.1, 3781284.8,   577.1,   577.1,   0.0);   (460054.1,
3781284.8,   576.6,   576.6,   0.0);
     (460104.1, 3781284.8,   577.1,   577.1,   0.0);   (460204.1,
3781284.8,   576.4,   576.4,   0.0);
     (460254.1, 3781284.8,   576.0,   576.0,   0.0);   (460304.1,
3781284.8,   575.2,   575.2,   0.0);

(459854.1, 3781334.8, 578.2, 785.2, 0.0); (459904.1, 3781334.8, 578.1, 785.2, 0.0);
(459954.1, 3781334.8, 578.3, 578.3, 0.0); (460004.1, 3781334.8, 578.6, 578.6, 0.0);
(460054.1, 3781334.8, 578.3, 578.3, 0.0); (460104.1, 3781334.8, 578.5, 578.5, 0.0);
(460204.1, 3781334.8, 577.9, 577.9, 0.0); (460254.1, 3781334.8, 577.4, 577.4, 0.0);
(460304.1, 3781334.8, 576.5, 576.5, 0.0); (460204.1, 3781384.8, 579.2, 579.2, 0.0);
(460254.1, 3781384.8, 578.3, 578.3, 0.0); (460304.1, 3781384.8, 577.3, 577.3, 0.0);
(460204.1, 3781434.8, 580.1, 580.1, 0.0); (460254.1, 3781434.8, 579.0, 579.0, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(460304.1, 3781434.8, 578.5, 578.5, 0.0); (460204.1, 3781484.8, 580.8, 580.8, 0.0);
(460254.1, 3781484.8, 580.2, 580.2, 0.0); (460304.1, 3781484.8, 579.2, 579.2, 0.0);
(460204.1, 3781534.8, 581.9, 581.9, 0.0); (460254.1, 3781534.8, 581.2, 581.2, 0.0);
(460304.1, 3781534.8, 581.5, 581.5, 0.0); (460204.1, 3781584.8, 583.1, 583.1, 0.0);
(460254.1, 3781584.8, 582.5, 582.5, 0.0); (460304.1, 3781584.8, 582.8, 582.8, 0.0);
(460204.1, 3781634.8, 584.4, 584.4, 0.0); (460254.1, 3781634.8, 583.8, 583.8, 0.0);
(460304.1, 3781634.8, 583.9, 583.9, 0.0); (460204.1, 3781684.8, 585.9, 585.9, 0.0);
(460254.1, 3781684.8, 585.4, 585.4, 0.0); (460304.1, 3781684.8, 585.0, 585.0, 0.0);
(460204.1, 3781734.8, 587.0, 785.2, 0.0); (460254.1, 3781734.8, 586.9, 586.9, 0.0);
(460349.5, 3779783.5, 530.2, 530.2, 0.0); (460399.5, 3779783.5, 530.0, 530.0, 0.0);
(460449.5, 3779783.5, 529.6, 529.6, 0.0); (460499.5, 3779783.5, 529.1, 529.1, 0.0);

     (460349.5, 3779833.5,   532.2,   532.2,   0.0);   (460399.5,
3779833.5,   531.6,   531.6,   0.0);
     (460449.5, 3779833.5,   530.8,   530.8,   0.0);   (460499.5,
3779833.5,   531.4,   531.4,   0.0);
     (460349.5, 3779883.5,   533.2,   533.2,   0.0);   (460399.5,
3779883.5,   533.3,   533.3,   0.0);
     (460449.5, 3779883.5,   532.3,   532.3,   0.0);   (460499.5,
3779883.5,   532.5,   532.5,   0.0);
     (460349.5, 3779933.5,   534.9,   534.9,   0.0);   (460399.5,
3779933.5,   534.6,   534.6,   0.0);
     (460449.5, 3779933.5,   534.0,   534.0,   0.0);   (460499.5,
3779933.5,   534.7,   534.7,   0.0);
     (460349.5, 3779983.5,   535.8,   535.8,   0.0);   (460399.5,
3779983.5,   535.8,   535.8,   0.0);
     (460449.5, 3779983.5,   535.6,   535.6,   0.0);   (460499.5,
3779983.5,   535.6,   535.6,   0.0);
     (460349.5, 3780033.5,   537.3,   537.3,   0.0);   (460399.5,
3780033.5,   536.7,   536.7,   0.0);
     (460449.5, 3780033.5,   537.2,   537.2,   0.0);   (460499.5,
3780033.5,   536.9,   536.9,   0.0);
     (460349.5, 3780083.5,   539.1,   539.1,   0.0);   (460399.5,
3780083.5,   538.7,   538.7,   0.0);
     (460449.5, 3780083.5,   538.4,   538.4,   0.0);   (460499.5,
3780083.5,   538.4,   538.4,   0.0);
     (460349.5, 3780133.5,   540.2,   540.2,   0.0);   (460399.5,
3780133.5,   539.8,   539.8,   0.0);
     (460449.5, 3780133.5,   539.5,   539.5,   0.0);   (460499.5,
3780133.5,   539.3,   539.3,   0.0);
     (460349.5, 3780183.5,   542.3,   542.3,   0.0);   (460399.5,
3780183.5,   541.8,   541.8,   0.0);
     (460449.5, 3780183.5,   541.5,   541.5,   0.0);   (460499.5,
3780183.5,   541.2,   541.2,   0.0);
     (460349.5, 3780233.5,   542.8,   542.8,   0.0);   (460399.5,
3780233.5,   542.8,   542.8,   0.0);
     (460449.5, 3780233.5,   542.1,   542.1,   0.0);   (460499.5,
3780233.5,   541.7,   541.7,   0.0);
     (460349.5, 3780283.5,   545.0,   545.0,   0.0);   (460399.5,
3780283.5,   544.7,   544.7,   0.0);
     (460449.5, 3780283.5,   543.7,   543.7,   0.0);   (460499.5,
3780283.5,   543.9,   543.9,   0.0);
     (460349.5, 3780333.5,   546.4,   546.4,   0.0);   (460399.5,
3780333.5,   546.1,   546.1,   0.0);
     (460449.5, 3780333.5,   545.1,   545.1,   0.0);   (460499.5,
3780333.5,   545.2,   545.2,   0.0);
     (460349.5, 3780383.5,   547.5,   547.5,   0.0);   (460399.5,
3780383.5,   547.4,   547.4,   0.0);
     (460449.5, 3780383.5,   546.6,   546.6,   0.0);   (460499.5,
3780383.5,   546.7,   546.7,   0.0);

(460349.5, 3780433.5, 549.1, 549.1, 0.0); (460399.5, 3780433.5, 548.9, 548.9, 0.0);
(460449.5, 3780433.5, 548.5, 548.5, 0.0); (460499.5, 3780433.5, 548.6, 548.6, 0.0);
(460349.5, 3780483.5, 550.0, 550.0, 0.0); (460399.5, 3780483.5, 550.7, 550.7, 0.0);
(460449.5, 3780483.5, 550.5, 550.5, 0.0); (460499.5, 3780483.5, 549.7, 549.7, 0.0);
(459759.1, 3781514.4, 586.3, 785.2, 0.0); (459711.3, 3781514.4, 586.7, 785.2, 0.0);
(459726.2, 3781543.2, 587.3, 785.2, 0.0); (459271.0, 3777660.4, 474.4, 474.4, 0.0);
(459321.0, 3777660.4, 474.8, 474.8, 0.0); (459371.0, 3777660.4, 474.5, 474.5, 0.0);
(459271.0, 3777710.4, 475.3, 475.3, 0.0); (459321.0, 3777710.4, 475.2, 475.2, 0.0);
(459371.0, 3777710.4, 473.0, 473.0, 0.0); (459421.0, 3777710.4, 473.4, 473.4, 0.0);
(459471.0, 3777710.4, 476.3, 476.3, 0.0); (459521.0, 3777710.4, 477.2, 477.2, 0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(459271.0, 3777760.4, 476.1, 476.1, 0.0); (459321.0, 3777760.4, 475.5, 475.5, 0.0);
(459371.0, 3777760.4, 473.4, 473.4, 0.0); (459421.0, 3777760.4, 473.3, 473.3, 0.0);
(459471.0, 3777760.4, 476.8, 476.8, 0.0); (459521.0, 3777760.4, 478.2, 478.2, 0.0);
(459571.0, 3777760.4, 477.8, 477.8, 0.0); (459621.0, 3777760.4, 478.2, 478.2, 0.0);
(459671.0, 3777760.4, 478.5, 478.5, 0.0); (459721.0, 3777760.4, 478.8, 478.8, 0.0);
(459771.0, 3777760.4, 478.4, 478.4, 0.0); (459271.0, 3777810.4, 475.2, 482.6, 0.0);
(459321.0, 3777810.4, 476.1, 476.1, 0.0); (459371.0, 3777810.4, 474.8, 474.8, 0.0);
(459421.0, 3777810.4, 472.2, 481.2, 0.0); (459471.0, 3777810.4, 478.7, 479.0, 0.0);

     (459521.0, 3777810.4,   479.2,   479.2,   0.0);   (459571.0,
3777810.4,   479.2,   479.2,   0.0);
     (459621.0, 3777810.4,   478.8,   478.8,   0.0);   (459671.0,
3777810.4,   479.6,   479.6,   0.0);
     (459721.0, 3777810.4,   479.9,   479.9,   0.0);   (459771.0,
3777810.4,   479.6,   479.6,   0.0);
     (459271.0, 3777860.4,   478.8,   483.7,   0.0);   (459321.0,
3777860.4,   477.8,   483.6,   0.0);
     (459371.0, 3777860.4,   476.7,   476.7,   0.0);   (459421.0,
3777860.4,   474.8,   481.9,   0.0);
     (459471.0, 3777860.4,   480.7,   480.7,   0.0);   (459521.0,
3777860.4,   480.7,   480.7,   0.0);
     (459571.0, 3777860.4,   481.2,   481.2,   0.0);   (459621.0,
3777860.4,   480.7,   480.7,   0.0);
     (459671.0, 3777860.4,   481.1,   481.1,   0.0);   (459721.0,
3777860.4,   481.4,   481.4,   0.0);
     (459771.0, 3777860.4,   481.3,   481.3,   0.0);   (459271.0,
3777910.4,   483.7,   483.7,   0.0);
     (459321.0, 3777910.4,   482.4,   482.4,   0.0);   (459371.0,
3777910.4,   478.3,   478.3,   0.0);
     (459421.0, 3777910.4,   478.3,   482.3,   0.0);   (459471.0,
3777910.4,   481.9,   481.9,   0.0);
     (459521.0, 3777910.4,   482.0,   482.0,   0.0);   (459571.0,
3777910.4,   482.7,   482.7,   0.0);
     (459621.0, 3777910.4,   482.5,   482.5,   0.0);   (459671.0,
3777910.4,   482.6,   482.6,   0.0);
     (459721.0, 3777910.4,   482.2,   482.2,   0.0);   (459771.0,
3777910.4,   482.3,   482.3,   0.0);
     (459271.0, 3777960.4,   484.0,   484.0,   0.0);   (459321.0,
3777960.4,   483.6,   483.6,   0.0);
     (459371.0, 3777960.4,   479.6,   479.6,   0.0);   (459421.0,
3777960.4,   481.6,   481.6,   0.0);
     (459471.0, 3777960.4,   482.7,   482.7,   0.0);   (459521.0,
3777960.4,   483.6,   483.6,   0.0);
     (459571.0, 3777960.4,   484.3,   484.3,   0.0);   (459621.0,
3777960.4,   483.8,   483.8,   0.0);
     (459671.0, 3777960.4,   483.6,   483.6,   0.0);   (459721.0,
3777960.4,   483.5,   483.5,   0.0);
     (459771.0, 3777960.4,   483.5,   483.5,   0.0);   (459271.0,
3778010.4,   484.6,   484.6,   0.0);
     (459321.0, 3778010.4,   482.8,   482.8,   0.0);   (459371.0,
3778010.4,   482.7,   482.7,   0.0);
     (459421.0, 3778010.4,   484.6,   484.6,   0.0);   (459471.0,
3778010.4,   483.6,   483.6,   0.0);
     (459521.0, 3778010.4,   484.6,   484.6,   0.0);   (459571.0,
3778010.4,   485.4,   485.4,   0.0);
     (459621.0, 3778010.4,   485.1,   485.1,   0.0);   (459671.0,
3778010.4,   485.2,   485.2,   0.0);

     (459721.0, 3778010.4,   485.5,   485.5,   0.0);   (459771.0,
3778010.4,   485.3,   485.3,   0.0);
     (459271.0, 3778060.4,   485.9,   485.9,   0.0);   (459321.0,
3778060.4,   483.9,   483.9,   0.0);
     (459371.0, 3778060.4,   485.5,   485.5,   0.0);   (459421.0,
3778060.4,   485.4,   485.4,   0.0);
     (459471.0, 3778060.4,   485.7,   485.7,   0.0);   (459521.0,
3778060.4,   486.0,   486.0,   0.0);
     (459571.0, 3778060.4,   486.6,   486.6,   0.0);   (459621.0,
3778060.4,   486.2,   486.2,   0.0);
     (459671.0, 3778060.4,   486.4,   486.4,   0.0);   (459721.0,
3778060.4,   486.7,   486.7,   0.0);
     (459771.0, 3778060.4,   486.5,   486.5,   0.0);   (459271.0,
3778110.4,   487.0,   487.0,   0.0);
     (459321.0, 3778110.4,   487.5,   487.5,   0.0);   (459371.0,
3778110.4,   486.2,   486.2,   0.0);
     (459421.0, 3778110.4,   486.6,   486.6,   0.0);   (459471.0,
3778110.4,   487.5,   487.5,   0.0);
     (459521.0, 3778110.4,   487.5,   487.5,   0.0);   (459571.0,
3778110.4,   487.7,   487.7,   0.0);
     (459621.0, 3778110.4,   487.2,   487.2,   0.0);   (459671.0,
3778110.4,   487.2,   487.2,   0.0);
     (459721.0, 3778110.4,   487.3,   487.3,   0.0);   (459771.0,
3778110.4,   487.4,   487.4,   0.0);
     (459271.0, 3778160.4,   488.5,   488.5,   0.0);   (459321.0,
3778160.4,   488.7,   488.7,   0.0);

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                         (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                   (METERS)

     (459371.0, 3778160.4,   484.0,   484.0,   0.0);   (459421.0,
3778160.4,   487.8,   487.8,   0.0);
     (459471.0, 3778160.4,   488.4,   488.4,   0.0);   (459521.0,
3778160.4,   488.5,   488.5,   0.0);
     (459571.0, 3778160.4,   488.9,   488.9,   0.0);   (459621.0,
3778160.4,   488.2,   488.2,   0.0);
     (459671.0, 3778160.4,   488.6,   488.6,   0.0);   (459721.0,
3778160.4,   488.9,   488.9,   0.0);
     (459771.0, 3778160.4,   488.8,   488.8,   0.0);   (459271.0,
3778210.4,   489.9,   489.9,   0.0);

     (459321.0, 3778210.4,   489.9,   489.9,   0.0);   (459371.0,
3778210.4,   484.6,   491.0,   0.0);
     (459421.0, 3778210.4,   488.9,   488.9,   0.0);   (459471.0,
3778210.4,   489.8,   489.8,   0.0);
     (459521.0, 3778210.4,   489.6,   489.6,   0.0);   (459571.0,
3778210.4,   490.1,   490.1,   0.0);
     (459621.0, 3778210.4,   489.5,   489.5,   0.0);   (459671.0,
3778210.4,   489.7,   489.7,   0.0);
     (459721.0, 3778210.4,   489.6,   489.6,   0.0);   (459771.0,
3778210.4,   489.8,   489.8,   0.0);
     (459271.0, 3778260.4,   491.2,   491.2,   0.0);   (459321.0,
3778260.4,   491.2,   491.2,   0.0);
     (459371.0, 3778260.4,   487.3,   487.3,   0.0);   (459421.0,
3778260.4,   489.6,   489.6,   0.0);
     (459471.0, 3778260.4,   490.7,   490.7,   0.0);   (459521.0,
3778260.4,   490.7,   490.7,   0.0);
     (459571.0, 3778260.4,   490.9,   490.9,   0.0);   (459621.0,
3778260.4,   490.7,   490.7,   0.0);
     (459671.0, 3778260.4,   490.9,   490.9,   0.0);   (459721.0,
3778260.4,   490.8,   490.8,   0.0);
     (459771.0, 3778260.4,   490.9,   490.9,   0.0);   (459271.0,
3778310.4,   491.9,   491.9,   0.0);
     (459321.0, 3778310.4,   491.6,   491.6,   0.0);   (459371.0,
3778310.4,   490.8,   490.8,   0.0);
     (459421.0, 3778310.4,   490.7,   490.7,   0.0);   (459471.0,
3778310.4,   491.1,   491.1,   0.0);
     (459521.0, 3778310.4,   491.3,   491.3,   0.0);   (459571.0,
3778310.4,   491.4,   491.4,   0.0);
     (459621.0, 3778310.4,   491.9,   491.9,   0.0);   (459671.0,
3778310.4,   492.4,   492.4,   0.0);
     (459721.0, 3778310.4,   492.9,   492.9,   0.0);   (459771.0,
3778310.4,   492.4,   492.4,   0.0);
     (459271.0, 3778360.4,   492.4,   492.4,   0.0);   (459321.0,
3778360.4,   491.8,   491.8,   0.0);
     (459371.0, 3778360.4,   487.9,   496.0,   0.0);   (459421.0,
3778360.4,   490.2,   490.2,   0.0);
     (459471.0, 3778360.4,   491.2,   491.2,   0.0);   (459521.0,
3778360.4,   492.4,   492.4,   0.0);
     (459571.0, 3778360.4,   493.0,   493.0,   0.0);   (459621.0,
3778360.4,   493.1,   493.1,   0.0);
     (459671.0, 3778360.4,   493.4,   493.4,   0.0);   (459721.0,
3778360.4,   494.1,   494.1,   0.0);
     (459771.0, 3778360.4,   494.1,   494.1,   0.0);   (459271.0,
3778410.4,   494.3,   494.3,   0.0);
     (459321.0, 3778410.4,   494.8,   494.8,   0.0);   (459371.0,
3778410.4,   493.7,   496.0,   0.0);
     (459421.0, 3778410.4,   491.6,   496.8,   0.0);   (459471.0,
3778410.4,   490.7,   490.7,   0.0);

     (459521.0, 3778410.4,   491.5,   491.5,   0.0);   (459571.0,
3778410.4,   493.7,   493.7,   0.0);
     (459621.0, 3778410.4,   494.7,   494.7,   0.0);   (459671.0,
3778410.4,   495.1,   495.1,   0.0);
     (459721.0, 3778410.4,   495.4,   495.4,   0.0);   (459771.0,
3778410.4,   495.3,   495.3,   0.0);
     (459271.0, 3778460.4,   495.9,   495.9,   0.0);   (459321.0,
3778460.4,   495.8,   495.8,   0.0);
     (459371.0, 3778460.4,   496.4,   496.4,   0.0);   (459421.0,
3778460.4,   496.8,   496.8,   0.0);
     (459471.0, 3778460.4,   494.5,   497.9,   0.0);   (459521.0,
3778460.4,   492.8,   497.9,   0.0);
     (459571.0, 3778460.4,   493.0,   493.0,   0.0);   (459621.0,
3778460.4,   496.4,   496.4,   0.0);
     (459671.0, 3778460.4,   496.3,   496.3,   0.0);   (459721.0,
3778460.4,   497.2,   497.2,   0.0);
     (459771.0, 3778460.4,   496.9,   496.9,   0.0);   (459271.0,
3778510.4,   497.7,   497.7,   0.0);
     (459321.0, 3778510.4,   497.8,   497.8,   0.0);   (459371.0,
3778510.4,   497.7,   497.7,   0.0);
     (459421.0, 3778510.4,   497.5,   497.5,   0.0);   (459471.0,
3778510.4,   498.0,   498.0,   0.0);
     (459521.0, 3778510.4,   498.3,   498.3,   0.0);   (459571.0,
3778510.4,   495.7,   495.7,   0.0);
     (459621.0, 3778510.4,   497.7,   497.7,   0.0);   (459671.0,
3778510.4,   497.9,   497.9,   0.0);
     (459721.0, 3778510.4,   497.9,   497.9,   0.0);   (459771.0,
3778510.4,   497.9,   497.9,   0.0);
     (459271.0, 3778560.4,   498.1,   498.1,   0.0);   (459321.0,
3778560.4,   498.1,   498.1,   0.0);
     (459371.0, 3778560.4,   498.0,   498.0,   0.0);   (459421.0,
3778560.4,   497.9,   497.9,   0.0);

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                  (METERS)

     (459471.0, 3778560.4,   498.5,   498.5,   0.0);   (459521.0,
3778560.4,   498.5,   498.5,   0.0);
     (459571.0, 3778560.4,   499.3,   499.3,   0.0);   (459621.0,
3778560.4,   500.1,   500.1,   0.0);

     (459671.0, 3778560.4,   499.4,   499.4,   0.0);   (459721.0,
3778560.4,   499.0,   499.0,   0.0);
     (459771.0, 3778560.4,   499.2,   499.2,   0.0);   (459271.0,
3778610.4,   495.9,   502.5,   0.0);
     (459321.0, 3778610.4,   497.4,   497.4,   0.0);   (459371.0,
3778610.4,   498.4,   498.4,   0.0);
     (459421.0, 3778610.4,   497.6,   497.6,   0.0);   (459471.0,
3778610.4,   497.9,   497.9,   0.0);
     (459521.0, 3778610.4,   498.4,   498.4,   0.0);   (459571.0,
3778610.4,   500.4,   500.4,   0.0);
     (459621.0, 3778610.4,   500.5,   500.5,   0.0);   (459671.0,
3778610.4,   500.5,   500.5,   0.0);
     (459721.0, 3778610.4,   500.2,   500.2,   0.0);   (459771.0,
3778610.4,   500.6,   500.6,   0.0);
     (459271.0, 3778660.4,   500.9,   502.5,   0.0);   (459321.0,
3778660.4,   501.4,   501.4,   0.0);
     (459371.0, 3778660.4,   501.4,   501.4,   0.0);   (459421.0,
3778660.4,   501.4,   501.4,   0.0);
     (459471.0, 3778660.4,   501.8,   501.8,   0.0);   (459521.0,
3778660.4,   501.4,   501.4,   0.0);
     (459571.0, 3778660.4,   501.1,   501.1,   0.0);   (459621.0,
3778660.4,   501.8,   501.8,   0.0);
     (459671.0, 3778660.4,   501.5,   501.5,   0.0);   (459721.0,
3778660.4,   501.2,   501.2,   0.0);
     (459771.0, 3778660.4,   501.5,   501.5,   0.0);   (459271.0,
3778710.4,   503.2,   503.2,   0.0);
     (459321.0, 3778710.4,   503.7,   503.7,   0.0);   (459371.0,
3778710.4,   503.7,   503.7,   0.0);
     (459421.0, 3778710.4,   503.2,   503.2,   0.0);   (459471.0,
3778710.4,   503.3,   503.3,   0.0);
     (459521.0, 3778710.4,   502.9,   502.9,   0.0);   (459571.0,
3778710.4,   502.6,   502.6,   0.0);
     (459621.0, 3778710.4,   503.4,   503.4,   0.0);   (459671.0,
3778710.4,   502.4,   502.4,   0.0);
     (459721.0, 3778710.4,   503.1,   503.1,   0.0);   (459771.0,
3778710.4,   503.1,   503.1,   0.0);
     (459271.0, 3778760.4,   504.1,   504.1,   0.0);   (459321.0,
3778760.4,   504.3,   504.3,   0.0);
     (459371.0, 3778760.4,   504.2,   504.2,   0.0);   (459421.0,
3778760.4,   504.2,   504.2,   0.0);
     (459471.0, 3778760.4,   504.4,   504.4,   0.0);   (459521.0,
3778760.4,   504.5,   504.5,   0.0);
     (459571.0, 3778760.4,   504.6,   504.6,   0.0);   (459621.0,
3778760.4,   503.9,   503.9,   0.0);
     (459671.0, 3778760.4,   503.9,   503.9,   0.0);   (459721.0,
3778760.4,   504.3,   504.3,   0.0);
     (459771.0, 3778760.4,   504.6,   504.6,   0.0);   (459271.0,
3778810.4,   505.4,   505.4,   0.0);

```
     ( 459321.0, 3778810.4,     505.4,     505.4,       0.0);         ( 459371.0,
3778810.4,     505.6,     505.6,       0.0);
     ( 459421.0, 3778810.4,     505.6,     505.6,       0.0);         ( 459471.0,
3778810.4,     505.9,     505.9,       0.0);
     ( 459521.0, 3778810.4,     505.8,     505.8,       0.0);         ( 459571.0,
3778810.4,     505.4,     505.4,       0.0);
     ( 459621.0, 3778810.4,     505.4,     505.4,       0.0);         ( 459671.0,
3778810.4,     505.1,     505.1,       0.0);
     ( 459721.0, 3778810.4,     505.7,     505.7,       0.0);         ( 459771.0,
3778810.4,     505.8,     505.8,       0.0);
     ( 459271.0, 3778860.4,     506.1,     506.1,       0.0);         ( 459321.0,
3778860.4,     506.0,     506.0,       0.0);
     ( 459371.0, 3778860.4,     506.2,     506.2,       0.0);         ( 459421.0,
3778860.4,     506.3,     506.3,       0.0);
     ( 459471.0, 3778860.4,     506.7,     506.7,       0.0);         ( 459521.0,
3778860.4,     506.5,     506.5,       0.0);
     ( 459571.0, 3778860.4,     506.0,     506.0,       0.0);         ( 459621.0,
3778860.4,     506.3,     506.3,       0.0);
     ( 459671.0, 3778860.4,     506.1,     506.1,       0.0);         ( 459721.0,
3778860.4,     506.6,     506.6,       0.0);
     ( 459771.0, 3778860.4,     507.0,     507.0,       0.0);         ( 459271.0,
3778910.4,     506.7,     506.7,       0.0);
     ( 459321.0, 3778910.4,     506.8,     506.8,       0.0);         ( 459371.0,
3778910.4,     507.0,     507.0,       0.0);
     ( 459421.0, 3778910.4,     507.2,     507.2,       0.0);         ( 459471.0,
3778910.4,     507.3,     507.3,       0.0);
     ( 459521.0, 3778910.4,     507.3,     507.3,       0.0);         ( 459571.0,
3778910.4,     507.2,     507.2,       0.0);
     ( 459621.0, 3778910.4,     507.5,     507.5,       0.0);         ( 459671.0,
3778910.4,     507.7,     507.7,       0.0);
     ( 459721.0, 3778910.4,     508.0,     508.0,       0.0);         ( 459771.0,
3778910.4,     508.2,     508.2,       0.0);
     ( 459271.0, 3778960.4,     509.2,     509.2,       0.0);         ( 459321.0,
3778960.4,     509.0,     509.0,       0.0);
     ( 459371.0, 3778960.4,     509.0,     509.0,       0.0);         ( 459421.0,
3778960.4,     509.3,     509.3,       0.0);
     ( 459471.0, 3778960.4,     509.4,     509.4,       0.0);         ( 459521.0,
3778960.4,     509.2,     509.2,       0.0);
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***       10:59:05
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                        *** DISCRETE CARTESIAN RECEPTORS ***
                                       (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
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(459571.0, 3778960.4, 509.0, 509.0, 0.0); (459621.0, 3778960.4, 509.1, 509.1, 0.0);
(459671.0, 3778960.4, 509.3, 509.3, 0.0); (459721.0, 3778960.4, 509.6, 509.6, 0.0);
(459771.0, 3778960.4, 509.6, 509.6, 0.0); (459271.0, 3779010.4, 510.5, 510.5, 0.0);
(459321.0, 3779010.4, 510.5, 510.5, 0.0); (459371.0, 3779010.4, 510.4, 510.4, 0.0);
(459421.0, 3779010.4, 510.7, 510.7, 0.0); (459471.0, 3779010.4, 510.9, 510.9, 0.0);
(459521.0, 3779010.4, 510.8, 510.8, 0.0); (459571.0, 3779010.4, 510.4, 510.4, 0.0);
(459621.0, 3779010.4, 510.5, 510.5, 0.0); (459671.0, 3779010.4, 510.7, 510.7, 0.0);
(459721.0, 3779010.4, 511.0, 511.0, 0.0); (459771.0, 3779010.4, 511.0, 511.0, 0.0);
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(459571.0, 3779060.4, 511.7, 511.7, 0.0); (459621.0, 3779060.4, 511.9, 511.9, 0.0);
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     (459721.0, 3779310.4,   518.9,   518.9,   0.0);   (459771.0,
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     (459371.0, 3779360.4,   520.2,   520.2,   0.0);   (459421.0,
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3779360.4,   520.1,   520.1,   0.0);
     (459571.0, 3779360.4,   519.8,   519.8,   0.0);   (459621.0,
3779360.4,   519.9,   519.9,   0.0);

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(459671.0, 3779360.4, 520.6, 520.6, 0.0); (459721.0, 3779360.4, 520.5, 520.5, 0.0);
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(459471.0, 3779460.4, 523.1, 523.1, 0.0); (459521.0, 3779460.4, 522.8, 522.8, 0.0);
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(459321.0, 3779510.4, 524.3, 524.3, 0.0); (459371.0, 3779510.4, 524.4, 524.4, 0.0);
(459421.0, 3779510.4, 524.2, 524.2, 0.0); (459471.0, 3779510.4, 524.4, 524.4, 0.0);
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(459721.0, 3779510.4, 524.8, 524.8, 0.0); (459771.0, 3779510.4, 524.6, 524.6, 0.0);
(459271.0, 3779560.4, 525.7, 525.7, 0.0); (459321.0, 3779560.4, 525.7, 525.7, 0.0);
(459371.0, 3779560.4, 525.8, 525.8, 0.0); (459421.0, 3779560.4, 525.6, 525.6, 0.0);

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3779660.4,     528.7,     528.7,       0.0);
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     ( 459771.0, 3779660.4,     529.0,     529.0,       0.0);         ( 459271.0,
3779710.4,     529.9,     529.9,       0.0);
     ( 459321.0, 3779710.4,     529.9,     529.9,       0.0);         ( 459371.0,
3779710.4,     530.1,     530.1,       0.0);
     ( 459421.0, 3779710.4,     530.0,     530.0,       0.0);         ( 459471.0,
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     ( 459521.0, 3779710.4,     530.2,     530.2,       0.0);         ( 459571.0,
3779710.4,     530.2,     530.2,       0.0);
     ( 459621.0, 3779710.4,     530.4,     530.4,       0.0);         ( 459671.0,
3779710.4,     530.6,     530.6,       0.0);
     ( 459721.0, 3779710.4,     530.5,     530.5,       0.0);         ( 459771.0,
3779710.4,     530.6,     530.6,       0.0);
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

                                  PAGE  55
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
```

Fontana_Sierra Casa Grande.ADO

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

```
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: FONT_V9_ADJU\FONT_v9.SFC
Met Version: 16216
Profile file: FONT_V9_ADJU\FONT_v9.PFL

Surface format: FREE

Fontana_Sierra Casa Grande.ADO

Profile format: FREE

Surface station no.: 3102 Name: UNKNOWN Year: 2011

Upper air station no.: 3190 Name: UNKNOWN Year: 2011

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
11	01	01	1	01	-18.5	0.194	-9.000	-9.000	-999.	204.	41.2	0.25	2.82	1.00	1.80	69.	9.1	276.4	5.5
11	01	01	1	02	-23.8	0.239	-9.000	-9.000	-999.	281.	63.0	0.25	2.82	1.00	2.20	52.	9.1	275.4	5.5
11	01	01	1	03	-18.5	0.194	-9.000	-9.000	-999.	205.	41.2	0.25	2.82	1.00	1.80	32.	9.1	275.4	5.5
11	01	01	1	04	-1.4	0.067	-9.000	-9.000	-999.	57.	18.3	0.25	2.82	1.00	0.40	27.	9.1	274.2	5.5
11	01	01	1	05	-18.6	0.194	-9.000	-9.000	-999.	204.	41.2	0.25	2.82	1.00	1.80	51.	9.1	274.2	5.5
11	01	01	1	06	-29.7	0.296	-9.000	-9.000	-999.	387.	96.6	0.25	2.82	1.00	2.70	53.	9.1	274.2	5.5
11	01	01	1	07	-24.0	0.239	-9.000	-9.000	-999.	282.	63.0	0.25	2.82	1.00	2.20	70.	9.1	274.2	5.5
11	01	01	1	08	-8.4	0.138	-9.000	-9.000	-999.	127.	27.3	0.25	2.82	0.54	1.30	72.	9.1	275.4	5.5
11	01	01	1	09	44.3	0.280	0.571	0.005	147.	356.	-43.5	0.25	2.82	0.32	2.20	67.	9.1	277.5	5.5
11	01	01	1	10	122.7	0.264	0.952	0.005	247.	326.	-13.2	0.25	2.82	0.25	1.80	83.	9.1	279.9	5.5
11	01	01	1	11	179.8	0.316	1.733	0.005	1017.	426.	-15.4	0.25	2.82	0.22	2.20	58.	9.1	282.0	5.5
11	01	01	1	12	206.0	0.320	1.940	0.008	1244.	435.	-14.0	0.25	2.82	0.21	2.20	115.	9.1	283.1	5.5
11	01	01	1	13	132.6	0.214	1.733	0.009	1377.	243.	-6.5	0.25	2.82	0.21	1.30	147.	9.1	284.2	5.5
11	01	01	1	14	147.0	0.216	1.818	0.009	1431.	242.	-6.0	0.25	2.82	0.23	1.30	219.	9.1	284.9	5.5
11	01	01	1	15	104.0	0.208	1.633	0.009	1468.	228.	-7.6	0.25	2.82	0.26	1.30	126.	9.1	285.4	5.5
11	01	01	1	16	26.4	0.140	1.037	0.009	1477.	127.	-9.1	0.25	2.82	0.35	0.90	151.	9.1	284.9	5.5
11	01	01	1	17	-9.0	0.137	-9.000	-9.000	-999.	121.	24.9	0.25	2.82	0.63	1.30	69.	9.1	283.1	5.5
11	01	01	1	18	-33.4	0.342	-9.000	-9.000	-999.	481.	129.0	0.25	2.82	1.00	3.10	81.	9.1	281.4	5.5

```
 11 01 01   1 19  -33.6  0.342 -9.000 -9.000 -999.  481.    128.9  0.25   2.82
1.00    3.10   51.    9.1  279.9    5.5
 11 01 01   1 20  -23.6  0.239 -9.000 -9.000 -999.  287.     63.1  0.25   2.82
1.00    2.20   77.    9.1  278.8    5.5
 11 01 01   1 21  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   53.    9.1  277.5    5.5
 11 01 01   1 22  -23.7  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82
1.00    2.20   58.    9.1  277.5    5.5
 11 01 01   1 23  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   64.    9.1  277.5    5.5
 11 01 01   1 24   -4.5  0.094 -9.000 -9.000 -999.   74.     16.3  0.25   2.82
1.00    0.90   52.    9.1  277.0    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 11 01 01 01    5.5 0 -999.  -99.00   276.5   99.0  -99.00  -99.00
 11 01 01 01    9.1 1   69.    1.80  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

                                  PAGE  57
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0004172    , L0004173
, L0004174    , L0004175    , L0004176    ,
                  L0004177    , L0004178    , L0004179    , L0004180    , L0004181
, L0004182    , L0004183    , L0004184    ,
                  L0004185    , L0004186    , L0004187    , L0004188    , L0004189
, L0004190    , L0004191    , L0004192    ,
                  L0004193    , L0004194    , L0004195    , L0004196    , L0004197
, L0004198    , L0004199    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

       X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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- -
460204.12 3779784.84 0.00080 460254.12
3779784.84 0.00060
460304.12 3779784.84 0.00048 460204.12
3779834.84 0.00077
460254.12 3779834.84 0.00059 460304.12
3779834.84 0.00048
460204.12 3779884.84 0.00068 460254.12
3779884.84 0.00055
460304.12 3779884.84 0.00046 460204.12
3779934.84 0.00058
460254.12 3779934.84 0.00049 460304.12
3779934.84 0.00042
460204.12 3779984.84 0.00050 460254.12
3779984.84 0.00045
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3780284.84 0.00017
460304.12 3780284.84 0.00017 460204.12
3780334.84 0.00015
460254.12 3780334.84 0.00015 460304.12
3780334.84 0.00015
460204.12 3780384.84 0.00013 460254.12
3780384.84 0.00013
460304.12 3780384.84 0.00013 460204.12
3780434.84 0.00012
460254.12 3780434.84 0.00012 460304.12
3780434.84 0.00012
460204.12 3780484.84 0.00011 460254.12
3780484.84 0.00011
460304.12 3780484.84 0.00011 460204.12
3780534.84 0.00010
460254.12 3780534.84 0.00010 460304.12

3780534.84   0.00010
         460054.12   3780584.84   0.00012   460104.12
3780584.84   0.00011
         460204.12   3780584.84   0.00010   460254.12
3780584.84   0.00009
         460304.12   3780584.84   0.00009   460054.12
3780634.84   0.00011
         460104.12   3780634.84   0.00010   460204.12
3780634.84   0.00009
         460254.12   3780634.84   0.00009   460304.12
3780634.84   0.00009
         459854.12   3780684.84   0.00029   459904.12
3780684.84   0.00018
         459954.12   3780684.84   0.00014   460004.12
3780684.84   0.00012
         460054.12   3780684.84   0.00011   460104.12
3780684.84   0.00010
         460204.12   3780684.84   0.00009   460254.12
3780684.84   0.00008
         460304.12   3780684.84   0.00008   459854.12
3780734.84   0.00029
         459904.12   3780734.84   0.00018   459954.12
3780734.84   0.00014
         460004.12   3780734.84   0.00012   460054.12
3780734.84   0.00010
         460104.12   3780734.84   0.00010   460204.12
3780734.84   0.00008
         460254.12   3780734.84   0.00008   460304.12
3780734.84   0.00008
         459854.12   3780784.84   0.00029   459904.12
3780784.84   0.00018
         459954.12   3780784.84   0.00014   460004.12
3780784.84   0.00012

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5 YEARS FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   L0004172   , L0004173 , L0004174   , L0004175   , L0004176   ,
                    L0004177   , L0004178   , L0004179   , L0004180   , L0004181 , L0004182   , L0004183   , L0004184   ,
                    L0004185   , L0004186   , L0004187   , L0004188   , L0004189

, L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197
, L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
460054.12	3780784.84	0.00010	460104.12	3780784.84	0.00009
460204.12	3780784.84	0.00008	460254.12	3780784.84	0.00008
460304.12	3780784.84	0.00007	459854.12	3780834.84	0.00029
459904.12	3780834.84	0.00018	459954.12	3780834.84	0.00013
460004.12	3780834.84	0.00011	460054.12	3780834.84	0.00010
460104.12	3780834.84	0.00009	460204.12	3780834.84	0.00008
460254.12	3780834.84	0.00007	460304.12	3780834.84	0.00007
459854.12	3780884.84	0.00028	459904.12	3780884.84	0.00017
459954.12	3780884.84	0.00013	460004.12	3780884.84	0.00011
460054.12	3780884.84	0.00010	460104.12	3780884.84	0.00009
460204.12	3780884.84	0.00008	460254.12	3780884.84	0.00007
460304.12	3780884.84	0.00007	459854.12	3780984.84	0.00027
459904.12	3780984.84	0.00017	459954.12	3780984.84	0.00013
460004.12	3780984.84	0.00011	460054.12	3780984.84	0.00009
460104.12	3780984.84	0.00008	460204.12	3780984.84	0.00007
460254.12	3780984.84	0.00007	460304.12	3780984.84	0.00006
459854.12	3781034.84	0.00027	459904.12	3781034.84	0.00017

```
         459954.12    3781034.84        0.00013                    460004.12
3781034.84        0.00010
         460054.12    3781034.84        0.00009                    460104.12
3781034.84        0.00008
         460204.12    3781034.84        0.00007                    460254.12
3781034.84        0.00006
         460304.12    3781034.84        0.00006                    459854.12
3781084.84        0.00027
         459904.12    3781084.84        0.00016                    459954.12
3781084.84        0.00012
         460004.12    3781084.84        0.00010                    460054.12
3781084.84        0.00009
         460104.12    3781084.84        0.00008                    460204.12
3781084.84        0.00007
         460254.12    3781084.84        0.00006                    460304.12
3781084.84        0.00006
         459854.12    3781134.84        0.00026                    459904.12
3781134.84        0.00016
         459954.12    3781134.84        0.00012                    460004.12
3781134.84        0.00010
         460054.12    3781134.84        0.00009                    460104.12
3781134.84        0.00008
         460204.12    3781134.84        0.00007                    460254.12
3781134.84        0.00006
         460304.12    3781134.84        0.00006                    459854.12
3781184.84        0.00026
         459904.12    3781184.84        0.00016                    459954.12
3781184.84        0.00012
         460004.12    3781184.84        0.00010                    460054.12
3781184.84        0.00008
         460104.12    3781184.84        0.00008                    460204.12
3781184.84        0.00006
         460254.12    3781184.84        0.00006                    460304.12
3781184.84        0.00006
         459854.12    3781234.84        0.00026                    459904.12
3781234.84        0.00016
         459954.12    3781234.84        0.00012                    460004.12
3781234.84        0.00010
         460054.12    3781234.84        0.00008                    460104.12
3781234.84        0.00007
         460204.12    3781234.84        0.00006                    460254.12
3781234.84        0.00006
         460304.12    3781234.84        0.00006                    459854.12
3781284.84        0.00025
         459904.12    3781284.84        0.00016                    459954.12
3781284.84        0.00012
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5 YEARS FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0004172   , L0004173 , L0004174   , L0004175   , L0004176   ,
L0004177   , L0004178   , L0004179   , L0004180   , L0004181 , L0004182   , L0004183   , L0004184   ,
L0004185   , L0004186   , L0004187   , L0004188   , L0004189 , L0004190   , L0004191   , L0004192   ,
L0004193   , L0004194   , L0004195   , L0004196   , L0004197 , L0004198   , L0004199   , . . .   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
460004.12	3781284.84	0.00010	460054.12	3781284.84	0.00008
460104.12	3781284.84	0.00007	460204.12	3781284.84	0.00006
460254.12	3781284.84	0.00006	460304.12	3781284.84	0.00005
459854.12	3781334.84	0.00025	459904.12	3781334.84	0.00015
459954.12	3781334.84	0.00012	460004.12	3781334.84	0.00009
460054.12	3781334.84	0.00008	460104.12	3781334.84	0.00007
460204.12	3781334.84	0.00006	460254.12	3781334.84	0.00006
460304.12	3781334.84	0.00005	460204.12	3781384.84	0.00006
460254.12	3781384.84	0.00005	460304.12	3781384.84	0.00005
460204.12	3781434.84	0.00006	460254.12	3781434.84	0.00005
460304.12	3781434.84	0.00005	460204.12		

3781484.84 0.00006
460254.12 3781484.84 0.00005 460304.12
3781484.84 0.00005
460204.12 3781534.84 0.00006 460254.12
3781534.84 0.00005
460304.12 3781534.84 0.00005 460204.12
3781584.84 0.00005
460254.12 3781584.84 0.00005 460304.12
3781584.84 0.00005
460204.12 3781634.84 0.00005 460254.12
3781634.84 0.00005
460304.12 3781634.84 0.00005 460204.12
3781684.84 0.00005
460254.12 3781684.84 0.00005 460304.12
3781684.84 0.00004
460204.12 3781734.84 0.00005 460254.12
3781734.84 0.00005
460349.55 3779783.46 0.00041 460399.55
3779783.46 0.00036
460449.55 3779783.46 0.00032 460499.55
3779783.46 0.00028
460349.55 3779833.46 0.00041 460399.55
3779833.46 0.00036
460449.55 3779833.46 0.00031 460499.55
3779833.46 0.00028
460349.55 3779883.46 0.00040 460399.55
3779883.46 0.00035
460449.55 3779883.46 0.00031 460499.55
3779883.46 0.00028
460349.55 3779933.46 0.00037 460399.55
3779933.46 0.00033
460449.55 3779933.46 0.00030 460499.55
3779933.46 0.00027
460349.55 3779983.46 0.00034 460399.55
3779983.46 0.00031
460449.55 3779983.46 0.00028 460499.55
3779983.46 0.00026
460349.55 3780033.46 0.00033 460399.55
3780033.46 0.00031
460449.55 3780033.46 0.00029 460499.55
3780033.46 0.00026
460349.55 3780083.46 0.00031 460399.55
3780083.46 0.00029
460449.55 3780083.46 0.00027 460499.55
3780083.46 0.00025
460349.55 3780133.46 0.00027 460399.55
3780133.46 0.00026
460449.55 3780133.46 0.00025 460499.55

3780133.46 0.00024
460349.55 3780183.46 0.00023 460399.55
3780183.46 0.00023
460449.55 3780183.46 0.00023 460499.55
3780183.46 0.00022
460349.55 3780233.46 0.00020 460399.55
3780233.46 0.00020
460449.55 3780233.46 0.00020 460499.55
3780233.46 0.00020
460349.55 3780283.46 0.00017 460399.55
3780283.46 0.00018
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 05/27/20
*** AERMET - VERSION 16216 *** ***
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PAGE 60
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
- -
460449.55 3780283.46 0.00018 460499.55
3780283.46 0.00018
460349.55 3780333.46 0.00015 460399.55
3780333.46 0.00015
460449.55 3780333.46 0.00016 460499.55
3780333.46 0.00016
460349.55 3780383.46 0.00013 460399.55
3780383.46 0.00014

460449.55 3780383.46 0.00014 460499.55
3780383.46 0.00014
460349.55 3780433.46 0.00012 460399.55
3780433.46 0.00012
460449.55 3780433.46 0.00012 460499.55
3780433.46 0.00013
460349.55 3780483.46 0.00011 460399.55
3780483.46 0.00011
460449.55 3780483.46 0.00011 460499.55
3780483.46 0.00011
459759.10 3781514.42 0.00027 459711.33
3781514.42 0.00015
459726.24 3781543.22 0.00017 459271.04
3777660.44 0.00022
459321.04 3777660.44 0.00024 459371.04
3777660.44 0.00027
459271.04 3777710.44 0.00023 459321.04
3777710.44 0.00025
459371.04 3777710.44 0.00028 459421.04
3777710.44 0.00032
459471.04 3777710.44 0.00037 459521.04
3777710.44 0.00044
459271.04 3777760.44 0.00023 459321.04
3777760.44 0.00026
459371.04 3777760.44 0.00029 459421.04
3777760.44 0.00033
459471.04 3777760.44 0.00038 459521.04
3777760.44 0.00045
459571.04 3777760.44 0.00054 459621.04
3777760.44 0.00069
459671.04 3777760.44 0.00094 459721.04
3777760.44 0.00150
459771.04 3777760.44 0.00379 459271.04
3777810.44 0.00024
459321.04 3777810.44 0.00026 459371.04
3777810.44 0.00030
459421.04 3777810.44 0.00033 459471.04
3777810.44 0.00038
459521.04 3777810.44 0.00045 459571.04
3777810.44 0.00055
459621.04 3777810.44 0.00070 459671.04
3777810.44 0.00095
459721.04 3777810.44 0.00150 459771.04
3777810.44 0.00376
459271.04 3777860.44 0.00024 459321.04
3777860.44 0.00027
459371.04 3777860.44 0.00030 459421.04
3777860.44 0.00034

```
         459471.04    3777860.44        0.00039                        459521.04
3777860.44        0.00046
         459571.04    3777860.44        0.00055                        459621.04
3777860.44        0.00070
         459671.04    3777860.44        0.00096                        459721.04
3777860.44        0.00150
         459771.04    3777860.44        0.00375                        459271.04
3777910.44        0.00024
         459321.04    3777910.44        0.00027                        459371.04
3777910.44        0.00031
         459421.04    3777910.44        0.00035                        459471.04
3777910.44        0.00039
         459521.04    3777910.44        0.00046                        459571.04
3777910.44        0.00056
         459621.04    3777910.44        0.00070                        459671.04
3777910.44        0.00096
         459721.04    3777910.44        0.00151                        459771.04
3777910.44        0.00372
         459271.04    3777960.44        0.00024                        459321.04
3777960.44        0.00027
         459371.04    3777960.44        0.00031                        459421.04
3777960.44        0.00035
         459471.04    3777960.44        0.00040                        459521.04
3777960.44        0.00046
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0004172    , L0004173
, L0004174    , L0004175    , L0004176    ,
                  L0004177    , L0004178    , L0004179    , L0004180    , L0004181
, L0004182    , L0004183    , L0004184    ,
                  L0004185    , L0004186    , L0004187    , L0004188    , L0004189
, L0004190    , L0004191    , L0004192    ,
                  L0004193    , L0004194    , L0004195    , L0004196    , L0004197
, L0004198    , L0004199    ,  . . .      ,

                                             *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                          ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **
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X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
459571.04	3777960.44	0.00056	459621.04	3777960.44	0.00071
459671.04	3777960.44	0.00096	459721.04	3777960.44	0.00151
459771.04	3777960.44	0.00369	459271.04	3778010.44	0.00024
459321.04	3778010.44	0.00027	459371.04	3778010.44	0.00031
459421.04	3778010.44	0.00034	459471.04	3778010.44	0.00040
459521.04	3778010.44	0.00047	459571.04	3778010.44	0.00056
459621.04	3778010.44	0.00071	459671.04	3778010.44	0.00096
459721.04	3778010.44	0.00150	459771.04	3778010.44	0.00367
459271.04	3778060.44	0.00025	459321.04	3778060.44	0.00028
459371.04	3778060.44	0.00031	459421.04	3778060.44	0.00035
459471.04	3778060.44	0.00040	459521.04	3778060.44	0.00047
459571.04	3778060.44	0.00056	459621.04	3778060.44	0.00071
459671.04	3778060.44	0.00096	459721.04	3778060.44	0.00150
459771.04	3778060.44	0.00365	459271.04	3778110.44	0.00025
459321.04	3778110.44	0.00027	459371.04	3778110.44	0.00031
459421.04	3778110.44	0.00035	459471.04	3778110.44	0.00040
459521.04	3778110.44	0.00047	459571.04	3778110.44	0.00057
459621.04	3778110.44	0.00072	459671.04	3778110.44	0.00097
459721.04	3778110.44	0.00151	459771.04	3778110.44	0.00363
459271.04	3778160.44	0.00025	459321.04	3778160.44	0.00028
459371.04	3778160.44	0.00032	459421.04	3778160.44	0.00035
459471.04	3778160.44	0.00040	459521.04		

```
3778160.44        0.00047
         459571.04    3778160.44        0.00057                        459621.04
3778160.44        0.00072
         459671.04    3778160.44        0.00097                        459721.04
3778160.44        0.00150
         459771.04    3778160.44        0.00361                        459271.04
3778210.44        0.00025
         459321.04    3778210.44        0.00028                        459371.04
3778210.44        0.00032
         459421.04    3778210.44        0.00035                        459471.04
3778210.44        0.00040
         459521.04    3778210.44        0.00048                        459571.04
3778210.44        0.00057
         459621.04    3778210.44        0.00072                        459671.04
3778210.44        0.00097
         459721.04    3778210.44        0.00151                        459771.04
3778210.44        0.00359
         459271.04    3778260.44        0.00025                        459321.04
3778260.44        0.00028
         459371.04    3778260.44        0.00032                        459421.04
3778260.44        0.00036
         459471.04    3778260.44        0.00041                        459521.04
3778260.44        0.00048
         459571.04    3778260.44        0.00057                        459621.04
3778260.44        0.00072
         459671.04    3778260.44        0.00097                        459721.04
3778260.44        0.00150
         459771.04    3778260.44        0.00356                        459271.04
3778310.44        0.00025
         459321.04    3778310.44        0.00028                        459371.04
3778310.44        0.00032
         459421.04    3778310.44        0.00036                        459471.04
3778310.44        0.00041
         459521.04    3778310.44        0.00048                        459571.04
3778310.44        0.00058
         459621.04    3778310.44        0.00072                        459671.04
3778310.44        0.00097
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                      ***        10:59:05

                                  PAGE  62
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0004172    , L0004173
```

, L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181
, L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189
, L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197
, L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
459721.04	3778310.44	0.00149	459771.04	3778310.44	0.00353
459271.04	3778360.44	0.00025	459321.04	3778360.44	0.00028
459371.04	3778360.44	0.00032	459421.04	3778360.44	0.00036
459471.04	3778360.44	0.00041	459521.04	3778360.44	0.00048
459571.04	3778360.44	0.00058	459621.04	3778360.44	0.00072
459671.04	3778360.44	0.00097	459721.04	3778360.44	0.00149
459771.04	3778360.44	0.00350	459271.04	3778410.44	0.00025
459321.04	3778410.44	0.00028	459371.04	3778410.44	0.00032
459421.04	3778410.44	0.00036	459471.04	3778410.44	0.00042
459521.04	3778410.44	0.00049	459571.04	3778410.44	0.00058
459621.04	3778410.44	0.00072	459671.04	3778410.44	0.00096
459721.04	3778410.44	0.00148	459771.04	3778410.44	0.00348
459271.04	3778460.44	0.00025	459321.04	3778460.44	0.00028
459371.04	3778460.44	0.00031	459421.04	3778460.44	0.00035
459471.04	3778460.44	0.00041	459521.04	3778460.44	0.00049

459571.04 3778460.44 0.00058 459621.04
3778460.44 0.00072
459671.04 3778460.44 0.00096 459721.04
3778460.44 0.00147
459771.04 3778460.44 0.00344 459271.04
3778510.44 0.00025
459321.04 3778510.44 0.00028 459371.04
3778510.44 0.00031
459421.04 3778510.44 0.00035 459471.04
3778510.44 0.00040
459521.04 3778510.44 0.00047 459571.04
3778510.44 0.00058
459621.04 3778510.44 0.00071 459671.04
3778510.44 0.00096
459721.04 3778510.44 0.00147 459771.04
3778510.44 0.00342
459271.04 3778560.44 0.00025 459321.04
3778560.44 0.00028
459371.04 3778560.44 0.00031 459421.04
3778560.44 0.00036
459471.04 3778560.44 0.00041 459521.04
3778560.44 0.00048
459571.04 3778560.44 0.00057 459621.04
3778560.44 0.00071
459671.04 3778560.44 0.00095 459721.04
3778560.44 0.00147
459771.04 3778560.44 0.00340 459271.04
3778610.44 0.00026
459321.04 3778610.44 0.00029 459371.04
3778610.44 0.00032
459421.04 3778610.44 0.00036 459471.04
3778610.44 0.00041
459521.04 3778610.44 0.00048 459571.04
3778610.44 0.00057
459621.04 3778610.44 0.00071 459671.04
3778610.44 0.00095
459721.04 3778610.44 0.00147 459771.04
3778610.44 0.00338
459271.04 3778660.44 0.00025 459321.04
3778660.44 0.00028
459371.04 3778660.44 0.00031 459421.04
3778660.44 0.00035
459471.04 3778660.44 0.00040 459521.04
3778660.44 0.00047
459571.04 3778660.44 0.00057 459621.04
3778660.44 0.00071
459671.04 3778660.44 0.00096 459721.04
3778660.44 0.00147

459771.04 3778660.44 0.00335 459271.04 3778710.44 0.00025
*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 05/27/20
*** AERMET - VERSION 16216 *** *** *** 10:59:05

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
459321.04	3778710.44	0.00028	459371.04	3778710.44	0.00031
459421.04	3778710.44	0.00035	459471.04	3778710.44	0.00040
459521.04	3778710.44	0.00047	459571.04	3778710.44	0.00057
459621.04	3778710.44	0.00071	459671.04	3778710.44	0.00096
459721.04	3778710.44	0.00146	459771.04	3778710.44	0.00333
459271.04	3778760.44	0.00025	459321.04	3778760.44	0.00028
459371.04	3778760.44	0.00031	459421.04	3778760.44	0.00035
459471.04	3778760.44	0.00040	459521.04	3778760.44	0.00047
459571.04	3778760.44	0.00057	459621.04		

```
3778760.44        0.00071
         459671.04    3778760.44        0.00096                    459721.04
3778760.44        0.00146
         459771.04    3778760.44        0.00332                    459271.04
3778810.44        0.00025
         459321.04    3778810.44        0.00028                    459371.04
3778810.44        0.00031
         459421.04    3778810.44        0.00035                    459471.04
3778810.44        0.00040
         459521.04    3778810.44        0.00047                    459571.04
3778810.44        0.00057
         459621.04    3778810.44        0.00071                    459671.04
3778810.44        0.00096
         459721.04    3778810.44        0.00146                    459771.04
3778810.44        0.00329
         459271.04    3778860.44        0.00025                    459321.04
3778860.44        0.00028
         459371.04    3778860.44        0.00031                    459421.04
3778860.44        0.00035
         459471.04    3778860.44        0.00040                    459521.04
3778860.44        0.00047
         459571.04    3778860.44        0.00057                    459621.04
3778860.44        0.00071
         459671.04    3778860.44        0.00096                    459721.04
3778860.44        0.00145
         459771.04    3778860.44        0.00327                    459271.04
3778910.44        0.00025
         459321.04    3778910.44        0.00028                    459371.04
3778910.44        0.00031
         459421.04    3778910.44        0.00035                    459471.04
3778910.44        0.00041
         459521.04    3778910.44        0.00048                    459571.04
3778910.44        0.00057
         459621.04    3778910.44        0.00071                    459671.04
3778910.44        0.00095
         459721.04    3778910.44        0.00145                    459771.04
3778910.44        0.00326
         459271.04    3778960.44        0.00025                    459321.04
3778960.44        0.00028
         459371.04    3778960.44        0.00031                    459421.04
3778960.44        0.00035
         459471.04    3778960.44        0.00040                    459521.04
3778960.44        0.00047
         459571.04    3778960.44        0.00057                    459621.04
3778960.44        0.00071
         459671.04    3778960.44        0.00095                    459721.04
3778960.44        0.00145
         459771.04    3778960.44        0.00325                    459271.04
```

3779010.44 0.00025
459321.04 3779010.44 0.00027 459371.04
3779010.44 0.00031
459421.04 3779010.44 0.00035 459471.04
3779010.44 0.00040
459521.04 3779010.44 0.00047 459571.04
3779010.44 0.00057
459621.04 3779010.44 0.00071 459671.04
3779010.44 0.00095
459721.04 3779010.44 0.00145 459771.04
3779010.44 0.00325
459271.04 3779060.44 0.00024 459321.04
3779060.44 0.00027
459371.04 3779060.44 0.00031 459421.04
3779060.44 0.00035

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
459471.04	3779060.44	0.00040	459521.04	3779060.44	0.00047
459571.04	3779060.44	0.00057	459621.04	3779060.44	0.00071

459671.04 3779060.44 0.00095 459721.04 3779060.44 0.00145
459771.04 3779060.44 0.00325 459271.04 3779110.44 0.00024
459321.04 3779110.44 0.00027 459371.04 3779110.44 0.00030
459421.04 3779110.44 0.00035 459471.04 3779110.44 0.00040
459521.04 3779110.44 0.00047 459571.04 3779110.44 0.00057
459621.04 3779110.44 0.00071 459671.04 3779110.44 0.00095
459721.04 3779110.44 0.00145 459771.04 3779110.44 0.00326
459271.04 3779160.44 0.00024 459321.04 3779160.44 0.00027
459371.04 3779160.44 0.00030 459421.04 3779160.44 0.00034
459471.04 3779160.44 0.00040 459521.04 3779160.44 0.00047
459571.04 3779160.44 0.00057 459621.04 3779160.44 0.00071
459671.04 3779160.44 0.00095 459721.04 3779160.44 0.00145
459771.04 3779160.44 0.00326 459271.04 3779210.44 0.00024
459321.04 3779210.44 0.00027 459371.04 3779210.44 0.00030
459421.04 3779210.44 0.00034 459471.04 3779210.44 0.00040
459521.04 3779210.44 0.00047 459571.04 3779210.44 0.00057
459621.04 3779210.44 0.00071 459671.04 3779210.44 0.00095
459721.04 3779210.44 0.00145 459771.04 3779210.44 0.00327
459271.04 3779260.44 0.00024 459321.04 3779260.44 0.00027
459371.04 3779260.44 0.00030 459421.04 3779260.44 0.00034
459471.04 3779260.44 0.00040 459521.04 3779260.44 0.00047
459571.04 3779260.44 0.00057 459621.04 3779260.44 0.00071
459671.04 3779260.44 0.00096 459721.04 3779260.44 0.00146
459771.04 3779260.44 0.00327 459271.04 3779310.44 0.00023

```
         459321.04    3779310.44        0.00026                        459371.04
3779310.44        0.00030
         459421.04    3779310.44        0.00034                        459471.04
3779310.44        0.00039
         459521.04    3779310.44        0.00046                        459571.04
3779310.44        0.00057
         459621.04    3779310.44        0.00071                        459671.04
3779310.44        0.00096
         459721.04    3779310.44        0.00146                        459771.04
3779310.44        0.00327
         459271.04    3779360.44        0.00023                        459321.04
3779360.44        0.00026
         459371.04    3779360.44        0.00029                        459421.04
3779360.44        0.00034
         459471.04    3779360.44        0.00039                        459521.04
3779360.44        0.00046
         459571.04    3779360.44        0.00056                        459621.04
3779360.44        0.00071
         459671.04    3779360.44        0.00096                        459721.04
3779360.44        0.00146
         459771.04    3779360.44        0.00328                        459271.04
3779410.44        0.00023
         459321.04    3779410.44        0.00025                        459371.04
3779410.44        0.00029
         459421.04    3779410.44        0.00033                        459471.04
3779410.44        0.00039
         459521.04    3779410.44        0.00046                        459571.04
3779410.44        0.00056
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                      ***        10:59:05

                                   PAGE  65
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     L0004172    , L0004173
, L0004174    , L0004175    , L0004176    ,
                  L0004177    , L0004178    , L0004179    , L0004180    , L0004181
, L0004182    , L0004183    , L0004184    ,
                  L0004185    , L0004186    , L0004187    , L0004188    , L0004189
, L0004190    , L0004191    , L0004192    ,
                  L0004193    , L0004194    , L0004195    , L0004196    , L0004197
, L0004198    , L0004199    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
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** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
459621.04	3779410.44	0.00071	459671.04	3779410.44	0.00096
459721.04	3779410.44	0.00147	459771.04	3779410.44	0.00330
459271.04	3779460.44	0.00022	459321.04	3779460.44	0.00025
459371.04	3779460.44	0.00028	459421.04	3779460.44	0.00033
459471.04	3779460.44	0.00038	459521.04	3779460.44	0.00045
459571.04	3779460.44	0.00056	459621.04	3779460.44	0.00071
459671.04	3779460.44	0.00096	459721.04	3779460.44	0.00148
459771.04	3779460.44	0.00331	459271.04	3779510.44	0.00022
459321.04	3779510.44	0.00024	459371.04	3779510.44	0.00028
459421.04	3779510.44	0.00032	459471.04	3779510.44	0.00037
459521.04	3779510.44	0.00045	459571.04	3779510.44	0.00055
459621.04	3779510.44	0.00071	459671.04	3779510.44	0.00096
459721.04	3779510.44	0.00149	459771.04	3779510.44	0.00333
459271.04	3779560.44	0.00021	459321.04	3779560.44	0.00024
459371.04	3779560.44	0.00027	459421.04	3779560.44	0.00031
459471.04	3779560.44	0.00037	459521.04	3779560.44	0.00044
459571.04	3779560.44	0.00054	459621.04	3779560.44	0.00070
459671.04	3779560.44	0.00096	459721.04	3779560.44	0.00150
459771.04	3779560.44	0.00337	459271.04	3779610.44	0.00021
459321.04	3779610.44	0.00023	459371.04		

3779610.44 0.00026
459421.04 3779610.44 0.00030 459471.04
3779610.44 0.00036
459521.04 3779610.44 0.00043 459571.04
3779610.44 0.00053
459621.04 3779610.44 0.00069 459671.04
3779610.44 0.00096
459721.04 3779610.44 0.00151 459771.04
3779610.44 0.00342
459271.04 3779660.44 0.00020 459321.04
3779660.44 0.00022
459371.04 3779660.44 0.00025 459421.04
3779660.44 0.00029
459471.04 3779660.44 0.00034 459521.04
3779660.44 0.00041
459571.04 3779660.44 0.00051 459621.04
3779660.44 0.00067
459671.04 3779660.44 0.00093 459721.04
3779660.44 0.00151
459771.04 3779660.44 0.00350 459271.04
3779710.44 0.00019
459321.04 3779710.44 0.00021 459371.04
3779710.44 0.00024
459421.04 3779710.44 0.00028 459471.04
3779710.44 0.00033
459521.04 3779710.44 0.00039 459571.04
3779710.44 0.00048
459621.04 3779710.44 0.00063 459671.04
3779710.44 0.00088
459721.04 3779710.44 0.00144 459771.04
3779710.44 0.00354

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197

, L0004198   , L0004199   , . . .   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460204.12	3779784.84	0.00365	(15102517)	460254.12	3779784.84	0.00254	(15102517)
460304.12	3779784.84	0.00199	(13090423)	460204.12	3779834.84	0.00376	(15102517)
460254.12	3779834.84	0.00288	(15102517)	460304.12	3779834.84	0.00225	(15102517)
460204.12	3779884.84	0.00278	(15102517)	460254.12	3779884.84	0.00239	(15102517)
460304.12	3779884.84	0.00205	(15102517)	460204.12	3779934.84	0.00235	(16072323)
460254.12	3779934.84	0.00208	(13090423)	460304.12	3779934.84	0.00187	(13090423)
460204.12	3779984.84	0.00223	(12081702)	460254.12	3779984.84	0.00200	(16072323)
460304.12	3779984.84	0.00182	(13090423)	460204.12	3780034.84	0.00239	(16062021)
460254.12	3780034.84	0.00193	(16072323)	460304.12	3780034.84	0.00177	(13090423)
460204.12	3780084.84	0.00235	(15081320)	460254.12	3780084.84	0.00210	(16062021)
460304.12	3780084.84	0.00187	(12091519)	460204.12	3780134.84	0.00230	(12101719)
460254.12	3780134.84	0.00205	(15101120)	460304.12	3780134.84	0.00187	(16062021)
460204.12	3780184.84	0.00231	(12101719)	460254.12	3780184.84	0.00203	(15081320)
460304.12	3780184.84	0.00188	(16061921)	460204.12	3780234.84	0.00229	(13100620)
460254.12	3780234.84	0.00206	(12101719)	460304.12	3780234.84	0.00188	(16061921)
460204.12	3780284.84	0.00230	(12091320)	460254.12	3780284.84	0.00210	(12101719)
460304.12	3780284.84	0.00192	(11082520)	460204.12	3780334.84	0.00233	(16072323)
460254.12	3780334.84	0.00209	(13090423)	460304.12	3780334.84	0.00191	(12101719)

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        460204.12   3780384.84        0.00236  (12081702)                460254.12
3780384.84        0.00212  (13090423)
        460304.12   3780384.84        0.00191  (12101719)                460204.12
3780434.84        0.00237  (12081702)
        460254.12   3780434.84        0.00215  (13090423)                460304.12
3780434.84        0.00194  (13082524)
        460204.12   3780484.84        0.00238  (12081702)                460254.12
3780484.84        0.00215  (13090423)
        460304.12   3780484.84        0.00196  (13090423)                460204.12
3780534.84        0.00239  (12081702)
        460254.12   3780534.84        0.00218  (13090423)                460304.12
3780534.84        0.00200  (13090423)
        460054.12   3780584.84        0.00290  (12072002)                460104.12
3780584.84        0.00275  (12080824)
        460204.12   3780584.84        0.00237  (12081702)                460254.12
3780584.84        0.00216  (16072323)
        460304.12   3780584.84        0.00201  (13090423)                460054.12
3780634.84        0.00283  (12072002)
        460104.12   3780634.84        0.00269  (12080824)                460204.12
3780634.84        0.00234  (12081702)
        460254.12   3780634.84        0.00216  (12081702)                460304.12
3780634.84        0.00201  (13090423)
        459854.12   3780684.84        0.00337  (12091321)                459904.12
3780684.84        0.00316  (15111919)
        459954.12   3780684.84        0.00301  (12071204)                460004.12
3780684.84        0.00293  (12081123)
        460054.12   3780684.84        0.00277  (12081524)                460104.12
3780684.84        0.00264  (16092019)
        460204.12   3780684.84        0.00231  (12081622)                460254.12
3780684.84        0.00215  (12081702)
        460304.12   3780684.84        0.00200  (13090423)                459854.12
3780734.84        0.00329  (12091321)
        459904.12   3780734.84        0.00308  (15111919)                459954.12
3780734.84        0.00294  (12071204)
        460004.12   3780734.84        0.00285  (12081123)                460054.12
3780734.84        0.00271  (12081524)
        460104.12   3780734.84        0.00259  (16092019)                460204.12
3780734.84        0.00228  (15082606)
        460254.12   3780734.84        0.00214  (12081702)                460304.12
3780734.84        0.00197  (16072323)
        459854.12   3780784.84        0.00321  (12091321)                459904.12
3780784.84        0.00300  (12091321)
        459954.12   3780784.84        0.00287  (12071204)                460004.12
3780784.84        0.00279  (12081123)
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 , L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 , L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 , L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460054.12	3780784.84	0.00266	(12081524)	460104.12	3780784.84	0.00254	(16092019)
460204.12	3780784.84	0.00225	(15082606)	460254.12	3780784.84	0.00212	(12081702)
460304.12	3780784.84	0.00196	(16072323)	459854.12	3780834.84	0.00314	(16071501)
459904.12	3780834.84	0.00293	(12091321)	459954.12	3780834.84	0.00280	(12071204)
460004.12	3780834.84	0.00271	(12081123)	460054.12	3780834.84	0.00260	(12081524)
460104.12	3780834.84	0.00248	(16092019)	460204.12	3780834.84	0.00221	(15082606)
460254.12	3780834.84	0.00209	(12081702)	460304.12	3780834.84	0.00194	(12081702)
459854.12	3780884.84	0.00306	(16071501)	459904.12	3780884.84	0.00286	(12091321)
459954.12	3780884.84	0.00273	(12071204)	460004.12	3780884.84	0.00264	(12081123)
460054.12	3780884.84	0.00253	(12081524)	460104.12	3780884.84	0.00241	(16092019)
460204.12	3780884.84	0.00217	(15082606)	460254.12	3780884.84	0.00205	(12081702)
460304.12	3780884.84	0.00193	(12081702)	459854.12			

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3780984.84        0.00293  (16071501)
        459904.12   3780984.84        0.00272  (12091321)                459954.12
3780984.84        0.00259  (12071204)
        460004.12   3780984.84        0.00249  (15101506)                460054.12
3780984.84        0.00241  (12081123)
        460104.12   3780984.84        0.00231  (12072002)                460204.12
3780984.84        0.00209  (12080824)
        460254.12   3780984.84        0.00200  (15082606)                460304.12
3780984.84        0.00190  (12081702)
        459854.12   3781034.84        0.00286  (16071501)                459904.12
3781034.84        0.00266  (12091321)
        459954.12   3781034.84        0.00252  (12071204)                460004.12
3781034.84        0.00243  (15101506)
        460054.12   3781034.84        0.00236  (12081123)                460104.12
3781034.84        0.00225  (12072002)
        460204.12   3781034.84        0.00206  (12080824)                460254.12
3781034.84        0.00196  (15082606)
        460304.12   3781034.84        0.00186  (12081702)                459854.12
3781084.84        0.00280  (16071501)
        459904.12   3781084.84        0.00260  (12091321)                459954.12
3781084.84        0.00246  (12071204)
        460004.12   3781084.84        0.00237  (15101506)                460054.12
3781084.84        0.00230  (12081123)
        460104.12   3781084.84        0.00219  (12072002)                460204.12
3781084.84        0.00203  (12080824)
        460254.12   3781084.84        0.00193  (15082606)                460304.12
3781084.84        0.00182  (12081702)
        459854.12   3781134.84        0.00274  (16071501)                459904.12
3781134.84        0.00254  (12091321)
        459954.12   3781134.84        0.00239  (12071204)                460004.12
3781134.84        0.00231  (15101506)
        460054.12   3781134.84        0.00225  (12081123)                460104.12
3781134.84        0.00215  (12081524)
        460204.12   3781134.84        0.00199  (12080824)                460254.12
3781134.84        0.00189  (15082606)
        460304.12   3781134.84        0.00180  (12081622)                459854.12
3781184.84        0.00267  (16071501)
        459904.12   3781184.84        0.00248  (12091321)                459954.12
3781184.84        0.00234  (15111919)
        460004.12   3781184.84        0.00225  (15101506)                460054.12
3781184.84        0.00220  (12081123)
        460104.12   3781184.84        0.00210  (12081524)                460204.12
3781184.84        0.00195  (12080824)
        460254.12   3781184.84        0.00184  (15082606)                460304.12
3781184.84        0.00176  (15082606)
        459854.12   3781234.84        0.00260  (16071501)                459904.12
3781234.84        0.00242  (12091321)
        459954.12   3781234.84        0.00229  (15111919)                460004.12
```

3781234.84 0.00219 (15101506)
  460054.12 3781234.84 0.00214 (12081123) 460104.12
3781234.84 0.00205 (12081524)
  460204.12 3781234.84 0.00190 (12080824) 460254.12
3781234.84 0.00180 (13061901)
  460304.12 3781234.84 0.00174 (15082606) 459854.12
3781284.84 0.00253 (16071501)
  459904.12 3781284.84 0.00237 (12091321) 459954.12
3781284.84 0.00224 (15111919)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
  L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
  L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
  L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460004.12	3781284.84	0.00214	(15101506)	460054.12	3781284.84	0.00209	(12081123)
460104.12	3781284.84	0.00200	(12081524)	460204.12	3781284.84	0.00185	(16092019)
460254.12	3781284.84	0.00177	(12080824)	460304.12	3781284.84	0.00171	(15082606)
459854.12	3781334.84	0.00250	(16071501)	459904.12	3781334.84	0.00232	(12091321)
459954.12	3781334.84	0.00218	(15111919)	460004.12	3781334.84	0.00208	(15101506)

460054.12 3781334.84 0.00203 (12081123) 460104.12 3781334.84 0.00195 (12081524)
460204.12 3781334.84 0.00182 (16092019) 460254.12 3781334.84 0.00175 (12080824)
460304.12 3781334.84 0.00168 (15082606) 460204.12 3781384.84 0.00179 (16092019)
460254.12 3781384.84 0.00172 (12080824) 460304.12 3781384.84 0.00165 (15082606)
460204.12 3781434.84 0.00175 (16092019) 460254.12 3781434.84 0.00170 (12080824)
460304.12 3781434.84 0.00162 (13061901) 460204.12 3781484.84 0.00172 (16092019)
460254.12 3781484.84 0.00167 (12080824) 460304.12 3781484.84 0.00160 (13061901)
460204.12 3781534.84 0.00169 (16092019) 460254.12 3781534.84 0.00164 (12080824)
460304.12 3781534.84 0.00156 (12080824) 460204.12 3781584.84 0.00165 (12072002)
460254.12 3781584.84 0.00160 (16092019) 460304.12 3781584.84 0.00154 (12080824)
460204.12 3781634.84 0.00162 (12072002) 460254.12 3781634.84 0.00158 (16092019)
460304.12 3781634.84 0.00152 (12080824) 460204.12 3781684.84 0.00159 (12072002)
460254.12 3781684.84 0.00155 (16092019) 460304.12 3781684.84 0.00150 (12080824)
460204.12 3781734.84 0.00156 (12072002) 460254.12 3781734.84 0.00152 (16092019)
460349.55 3779783.46 0.00178 (11080123) 460399.55 3779783.46 0.00162 (13082524)
460449.55 3779783.46 0.00148 (11123117) 460499.55 3779783.46 0.00136 (15073005)
460349.55 3779833.46 0.00181 (15102517) 460399.55 3779833.46 0.00160 (13082524)
460449.55 3779833.46 0.00147 (11123117) 460499.55 3779833.46 0.00135 (11070924)
460349.55 3779883.46 0.00177 (15102517) 460399.55 3779883.46 0.00158 (13082524)
460449.55 3779883.46 0.00146 (13082524) 460499.55 3779883.46 0.00134 (11123117)
460349.55 3779933.46 0.00171 (11080123) 460399.55 3779933.46 0.00156 (13082524)
460449.55 3779933.46 0.00144 (13082524) 460499.55 3779933.46 0.00132 (11123117)
460349.55 3779983.46 0.00167 (13090423) 460399.55 3779983.46 0.00153 (13082524)
460449.55 3779983.46 0.00142 (13082524) 460499.55 3779983.46 0.00131 (11123117)

```
        460349.55   3780033.46        0.00164  (13090423)                460399.55
3780033.46        0.00151  (11080123)
        460449.55   3780033.46        0.00139  (13082524)                460499.55
3780033.46        0.00130  (11123117)
        460349.55   3780083.46        0.00168  (15092020)                460399.55
3780083.46        0.00150  (15092020)
        460449.55   3780083.46        0.00137  (13082524)                460499.55
3780083.46        0.00128  (13082524)
        460349.55   3780133.46        0.00170  (12091519)                460399.55
3780133.46        0.00153  (16081420)
        460449.55   3780133.46        0.00139  (15092020)                460499.55
3780133.46        0.00128  (12071819)
        460349.55   3780183.46        0.00174  (16062021)                460399.55
3780183.46        0.00159  (12091519)
        460449.55   3780183.46        0.00145  (16081420)                460499.55
3780183.46        0.00134  (15062821)
        460349.55   3780233.46        0.00171  (13082921)                460399.55
3780233.46        0.00158  (16062021)
        460449.55   3780233.46        0.00144  (12091519)                460499.55
3780233.46        0.00133  (16081420)
        460349.55   3780283.46        0.00178  (16061921)                460399.55
3780283.46        0.00164  (13082921)
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                      ***        10:59:05

                                 PAGE  69
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0004172    , L0004173
, L0004174    , L0004175    , L0004176    ,
                 L0004177    , L0004178    , L0004179    , L0004180    , L0004181
, L0004182    , L0004183    , L0004184    ,
                 L0004185    , L0004186    , L0004187    , L0004188    , L0004189
, L0004190    , L0004191    , L0004192    ,
                 L0004193    , L0004194    , L0004195    , L0004196    , L0004197
, L0004198    , L0004199    ,  . . .      ,

                                          *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
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Y-COORD (M)		CONC	(YYMMDDHH)		
460449.55	3780283.46	0.00148	(15062822)	460499.55	3780283.46
0.00139	(11090721)				
460349.55	3780333.46	0.00179	(13062921)	460399.55	3780333.46
0.00165	(12080721)				
460449.55	3780333.46	0.00151	(13082921)	460499.55	3780333.46
0.00141	(12081623)				
460349.55	3780383.46	0.00176	(11070304)	460399.55	3780383.46
0.00166	(13062921)				
460449.55	3780383.46	0.00153	(12080721)	460499.55	3780383.46
0.00144	(15062822)				
460349.55	3780433.46	0.00177	(12091621)	460399.55	3780433.46
0.00166	(15101219)				
460449.55	3780433.46	0.00155	(13062921)	460499.55	3780433.46
0.00146	(13082921)				
460349.55	3780483.46	0.00179	(13082524)	460399.55	3780483.46
0.00170	(15101219)				
460449.55	3780483.46	0.00157	(12081406)	460499.55	3780483.46
0.00145	(15090822)				
459759.10	3781514.42	0.00244	(11082623)	459711.33	3781514.42
0.00211	(11082623)				
459726.24	3781543.22	0.00218	(11082623)	459271.04	3777660.44
0.00064	(13071606)				
459321.04	3777660.44	0.00071	(13071606)	459371.04	3777660.44
0.00079	(13071606)				
459271.04	3777710.44	0.00066	(13071606)	459321.04	3777710.44
0.00073	(13071606)				
459371.04	3777710.44	0.00082	(13071606)	459421.04	3777710.44
0.00093	(13071606)				
459471.04	3777710.44	0.00108	(13071606)	459521.04	3777710.44
0.00127	(13071606)				
459271.04	3777760.44	0.00068	(13071606)	459321.04	3777760.44
0.00075	(13071606)				
459371.04	3777760.44	0.00084	(13071606)	459421.04	3777760.44
0.00095	(13071606)				
459471.04	3777760.44	0.00111	(13071606)	459521.04	3777760.44
0.00131	(13071606)				
459571.04	3777760.44	0.00158	(13071606)	459621.04	3777760.44
0.00200	(13071606)				
459671.04	3777760.44	0.00271	(13071606)	459721.04	3777760.44
0.00439	(16012717)				
459771.04	3777760.44	0.01188	(16012717)	459271.04	3777810.44
0.00069	(13071606)				
459321.04	3777810.44	0.00077	(13071606)	459371.04	3777810.44
0.00086	(13071606)				
459421.04	3777810.44	0.00097	(13071606)	459471.04	

3777810.44 0.00114 (13071606)
  459521.04 3777810.44 0.00134 (13071606) 459571.04
3777810.44 0.00162 (13071606)
  459621.04 3777810.44 0.00204 (13071606) 459671.04
3777810.44 0.00275 (13071606)
  459721.04 3777810.44 0.00438 (16012717) 459771.04
3777810.44 0.01176 (16012717)
  459271.04 3777860.44 0.00071 (13071606) 459321.04
3777860.44 0.00079 (13071606)
  459371.04 3777860.44 0.00088 (13071606) 459421.04
3777860.44 0.00100 (13071606)
  459471.04 3777860.44 0.00119 (16031621) 459521.04
3777860.44 0.00136 (13071606)
  459571.04 3777860.44 0.00165 (12101801) 459621.04
3777860.44 0.00207 (13071606)
  459671.04 3777860.44 0.00278 (13071606) 459721.04
3777860.44 0.00437 (16012717)
  459771.04 3777860.44 0.01174 (16012717) 459271.04
3777910.44 0.00091 (13051221)
  459321.04 3777910.44 0.00093 (13092605) 459371.04
3777910.44 0.00090 (13071606)
  459421.04 3777910.44 0.00102 (13071606) 459471.04
3777910.44 0.00128 (16031621)
  459521.04 3777910.44 0.00147 (12101801) 459571.04
3777910.44 0.00179 (12081122)
  459621.04 3777910.44 0.00214 (11082701) 459671.04
3777910.44 0.00280 (13071606)
  459721.04 3777910.44 0.00436 (16012717) 459771.04
3777910.44 0.01163 (16012717)
  459271.04 3777960.44 0.00092 (13051221) 459321.04
3777960.44 0.00100 (15090824)
  459371.04 3777960.44 0.00092 (13071606) 459421.04
3777960.44 0.00109 (16031621)
  459471.04 3777960.44 0.00131 (13051321) 459521.04
3777960.44 0.00158 (16061822)

                              *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                 INCLUDING SOURCE(S):   L0004172   , L0004173 , L0004174   , L0004175   , L0004176   ,
                L0004177   , L0004178   , L0004179   , L0004180   , L0004181

, L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189
, L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197
, L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459571.04	3777960.44	0.00191	(12081122)	459621.04	3777960.44	0.00224	(15101121)
459671.04	3777960.44	0.00282	(13071606)	459721.04	3777960.44	0.00435	(16012717)
459771.04	3777960.44	0.01149	(16012717)	459271.04	3778010.44	0.00096	(15090824)
459321.04	3778010.44	0.00094	(13103120)	459371.04	3778010.44	0.00104	(16031621)
459421.04	3778010.44	0.00127	(16031621)	459471.04	3778010.44	0.00136	(16061822)
459521.04	3778010.44	0.00165	(12081122)	459571.04	3778010.44	0.00199	(13082623)
459621.04	3778010.44	0.00232	(12091206)	459671.04	3778010.44	0.00296	(15090919)
459721.04	3778010.44	0.00434	(16012717)	459771.04	3778010.44	0.01147	(16012717)
459271.04	3778060.44	0.00101	(15090824)	459321.04	3778060.44	0.00099	(15060920)
459371.04	3778060.44	0.00119	(15060920)	459421.04	3778060.44	0.00131	(13051321)
459471.04	3778060.44	0.00149	(16061822)	459521.04	3778060.44	0.00173	(12081122)
459571.04	3778060.44	0.00206	(15101121)	459621.04	3778060.44	0.00239	(12091206)
459671.04	3778060.44	0.00304	(15090919)	459721.04	3778060.44	0.00433	(16012717)
459771.04	3778060.44	0.01140	(16012717)	459271.04	3778110.44	0.00104	(15090824)
459321.04	3778110.44	0.00116	(15060920)	459371.04	3778110.44	0.00121	(11070903)
459421.04	3778110.44	0.00137	(13051321)	459471.04	3778110.44	0.00159	(12081122)

459521.04 3778110.44 0.00181 (13082901) 459571.04 3778110.44 0.00212 (15101121)
459621.04 3778110.44 0.00244 (15090919) 459671.04 3778110.44 0.00303 (15090919)
459721.04 3778110.44 0.00433 (16012717) 459771.04 3778110.44 0.01130 (16012717)
459271.04 3778160.44 0.00109 (15060920) 459321.04 3778160.44 0.00120 (15060920)
459371.04 3778160.44 0.00106 (16061822) 459421.04 3778160.44 0.00142 (16061822)
459471.04 3778160.44 0.00163 (12081122) 459521.04 3778160.44 0.00185 (13082623)
459571.04 3778160.44 0.00217 (15101121) 459621.04 3778160.44 0.00251 (15090919)
459671.04 3778160.44 0.00314 (15090919) 459721.04 3778160.44 0.00432 (13071606)
459771.04 3778160.44 0.01126 (16012717) 459271.04 3778210.44 0.00114 (15060920)
459321.04 3778210.44 0.00124 (11070903) 459371.04 3778210.44 0.00108 (12081122)
459421.04 3778210.44 0.00146 (12081122) 459471.04 3778210.44 0.00168 (12081122)
459521.04 3778210.44 0.00190 (15101121) 459571.04 3778210.44 0.00221 (12091206)
459621.04 3778210.44 0.00259 (15090919) 459671.04 3778210.44 0.00315 (15090919)
459721.04 3778210.44 0.00432 (13071606) 459771.04 3778210.44 0.01118 (16012717)
459271.04 3778260.44 0.00117 (15060920) 459321.04 3778260.44 0.00128 (13051321)
459371.04 3778260.44 0.00123 (12081122) 459421.04 3778260.44 0.00148 (12081122)
459471.04 3778260.44 0.00171 (13082623) 459521.04 3778260.44 0.00194 (15101121)
459571.04 3778260.44 0.00223 (12091206) 459621.04 3778260.44 0.00266 (15090919)
459671.04 3778260.44 0.00322 (11071924) 459721.04 3778260.44 0.00432 (13071606)
459771.04 3778260.44 0.01105 (16012717) 459271.04 3778310.44 0.00119 (11070903)
459321.04 3778310.44 0.00129 (13051321) 459371.04 3778310.44 0.00138 (12081122)
459421.04 3778310.44 0.00151 (12081122) 459471.04 3778310.44 0.00171 (15101121)
459521.04 3778310.44 0.00194 (15101121) 459571.04 3778310.44 0.00222 (11100120)
459621.04 3778310.44 0.00270 (15090919) 459671.04 3778310.44 0.00332 (15060822)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                             *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                 INCLUDING SOURCE(S):   L0004172   , L0004173 , L0004174   , L0004175   , L0004176   ,
                  L0004177   , L0004178   , L0004179   , L0004180   , L0004181 , L0004182   , L0004183   , L0004184   ,
                  L0004185   , L0004186   , L0004187   , L0004188   , L0004189 , L0004190   , L0004191   , L0004192   ,
                  L0004193   , L0004194   , L0004195   , L0004196   , L0004197 , L0004198   , L0004199   , . . .   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                              ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)
 -
        459721.04   3778310.44   0.00449 (12081101)   459771.04   3778310.44   0.01096 (16012717)
        459271.04   3778360.44   0.00120 (13051321)   459321.04   3778360.44   0.00129 (16061822)
        459371.04   3778360.44   0.00122 (13082901)   459421.04   3778360.44   0.00147 (13082623)
        459471.04   3778360.44   0.00170 (15101121)   459521.04   3778360.44   0.00197 (12091206)
        459571.04   3778360.44   0.00230 (11100120)   459621.04   3778360.44   0.00275 (15090919)
        459671.04   3778360.44   0.00336 (15060822)   459721.04   3778360.44   0.00455 (12081101)
        459771.04   3778360.44   0.01091 (16012717)   459271.04   3778410.44   0.00125 (13051321)
        459321.04   3778410.44   0.00137 (16061822)   459371.04   3778410.44   0.00147 (12081122)
        459421.04   3778410.44   0.00152 (15101121)   459471.04   3778410.44   0.00161 (15101121)
        459521.04   3778410.44   0.00186 (12091206)   459571.04

3778410.44 0.00233 (15090919)
459621.04 3778410.44 0.00284 (15090919) 459671.04
3778410.44 0.00349 (15060822)
459721.04 3778410.44 0.00467 (12081101) 459771.04
3778410.44 0.01084 (16012717)
459271.04 3778460.44 0.00127 (13051321) 459321.04
3778460.44 0.00138 (16061822)
459371.04 3778460.44 0.00153 (12081122) 459421.04
3778460.44 0.00169 (13082623)
459471.04 3778460.44 0.00181 (15101121) 459521.04
3778460.44 0.00192 (11100120)
459571.04 3778460.44 0.00223 (15090919) 459621.04
3778460.44 0.00292 (15090919)
459671.04 3778460.44 0.00354 (15060822) 459721.04
3778460.44 0.00485 (12081101)
459771.04 3778460.44 0.01077 (16012717) 459271.04
3778510.44 0.00132 (15082522)
459321.04 3778510.44 0.00143 (16102718) 459371.04
3778510.44 0.00154 (16062105)
459421.04 3778510.44 0.00171 (15101121) 459471.04
3778510.44 0.00192 (15101121)
459521.04 3778510.44 0.00217 (12091206) 459571.04
3778510.44 0.00240 (15090919)
459621.04 3778510.44 0.00296 (15090919) 459671.04
3778510.44 0.00366 (15060822)
459721.04 3778510.44 0.00479 (12081101) 459771.04
3778510.44 0.01067 (16012717)
459271.04 3778560.44 0.00132 (16102718) 459321.04
3778560.44 0.00143 (12081122)
459371.04 3778560.44 0.00156 (13082623) 459421.04
3778560.44 0.00172 (15101121)
459471.04 3778560.44 0.00192 (15101121) 459521.04
3778560.44 0.00217 (12091206)
459571.04 3778560.44 0.00257 (15090919) 459621.04
3778560.44 0.00308 (15090919)
459671.04 3778560.44 0.00372 (15060822) 459721.04
3778560.44 0.00480 (12081101)
459771.04 3778560.44 0.01061 (16012717) 459271.04
3778610.44 0.00127 (12081122)
459321.04 3778610.44 0.00141 (13082901) 459371.04
3778610.44 0.00157 (13082623)
459421.04 3778610.44 0.00170 (15101121) 459471.04
3778610.44 0.00189 (12091206)
459521.04 3778610.44 0.00216 (11100120) 459571.04
3778610.44 0.00260 (15090919)
459621.04 3778610.44 0.00304 (15090919) 459671.04
3778610.44 0.00375 (15060822)
459721.04 3778610.44 0.00484 (12081101) 459771.04

3778610.44 0.01056 (16012717)
  459271.04 3778660.44 0.00138 (16102718) 459321.04
3778660.44 0.00151 (16062105)
  459371.04 3778660.44 0.00166 (16072824) 459421.04
3778660.44 0.00182 (13092321)
  459471.04 3778660.44 0.00201 (13082423) 459521.04
3778660.44 0.00227 (15081522)
  459571.04 3778660.44 0.00261 (15090919) 459621.04
3778660.44 0.00307 (15020821)
  459671.04 3778660.44 0.00375 (15060822) 459721.04
3778660.44 0.00483 (12081101)
  459771.04 3778660.44 0.01047 (16012717) 459271.04
3778710.44 0.00143 (16102718)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459321.04	3778710.44	0.00156	(16062105)	459371.04	3778710.44	0.00171	(16072824)
459421.04	3778710.44	0.00187	(13092321)	459471.04	3778710.44	0.00206	(16070903)
459521.04	3778710.44	0.00232	(15081522)	459571.04	3778710.44	0.00265	(15090919)

459621.04 3778710.44 0.00314 (13090422) 459671.04 3778710.44 0.00374 (15060822)
459721.04 3778710.44 0.00499 (12081101) 459771.04 3778710.44 0.01042 (16012717)
459271.04 3778760.44 0.00144 (15083102) 459321.04 3778760.44 0.00158 (16072824)
459371.04 3778760.44 0.00171 (13092321) 459421.04 3778760.44 0.00189 (13082423)
459471.04 3778760.44 0.00210 (15081522) 459521.04 3778760.44 0.00238 (13090305)
459571.04 3778760.44 0.00273 (15063020) 459621.04 3778760.44 0.00312 (11071924)
459671.04 3778760.44 0.00379 (15060822) 459721.04 3778760.44 0.00500 (12081101)
459771.04 3778760.44 0.01040 (16012717) 459271.04 3778810.44 0.00147 (16062105)
459321.04 3778810.44 0.00160 (16072824) 459371.04 3778810.44 0.00175 (13092321)
459421.04 3778810.44 0.00192 (13082423) 459471.04 3778810.44 0.00215 (15081522)
459521.04 3778810.44 0.00241 (13090305) 459571.04 3778810.44 0.00274 (13090422)
459621.04 3778810.44 0.00316 (11071924) 459671.04 3778810.44 0.00380 (15060822)
459721.04 3778810.44 0.00503 (12081101) 459771.04 3778810.44 0.01033 (16012717)
459271.04 3778860.44 0.00148 (16072824) 459321.04 3778860.44 0.00161 (16072824)
459371.04 3778860.44 0.00176 (13092321) 459421.04 3778860.44 0.00192 (13082423)
459471.04 3778860.44 0.00216 (15081522) 459521.04 3778860.44 0.00243 (15063020)
459571.04 3778860.44 0.00274 (13090422) 459621.04 3778860.44 0.00317 (11071924)
459671.04 3778860.44 0.00379 (16073003) 459721.04 3778860.44 0.00500 (12081101)
459771.04 3778860.44 0.01028 (16012717) 459271.04 3778910.44 0.00150 (16072824)
459321.04 3778910.44 0.00161 (13092321) 459371.04 3778910.44 0.00177 (13092321)
459421.04 3778910.44 0.00193 (16070903) 459471.04 3778910.44 0.00217 (15081522)
459521.04 3778910.44 0.00244 (15063020) 459571.04 3778910.44 0.00278 (13090422)
459621.04 3778910.44 0.00320 (15060822) 459671.04 3778910.44 0.00385 (16073003)
459721.04 3778910.44 0.00506 (12081101) 459771.04 3778910.44 0.01027 (16012717)

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        459271.04   3778960.44        0.00153  (16072824)                459321.04
3778960.44        0.00165  (13092321)
        459371.04   3778960.44        0.00181  (13082423)                459421.04
3778960.44        0.00198  (16070903)
        459471.04   3778960.44        0.00223  (15081522)                459521.04
3778960.44        0.00251  (15063020)
        459571.04   3778960.44        0.00285  (13090422)                459621.04
3778960.44        0.00325  (15060822)
        459671.04   3778960.44        0.00391  (16073003)                459721.04
3778960.44        0.00515  (12081101)
        459771.04   3778960.44        0.01028  (16012717)                459271.04
3779010.44        0.00155  (16072824)
        459321.04   3779010.44        0.00168  (13092321)                459371.04
3779010.44        0.00183  (13082423)
        459421.04   3779010.44        0.00201  (15081522)                459471.04
3779010.44        0.00226  (15081522)
        459521.04   3779010.44        0.00255  (15063020)                459571.04
3779010.44        0.00289  (13090422)
        459621.04   3779010.44        0.00329  (13090923)                459671.04
3779010.44        0.00396  (12082102)
        459721.04   3779010.44        0.00520  (12081101)                459771.04
3779010.44        0.01032  (16012717)
        459271.04   3779060.44        0.00156  (16072824)                459321.04
3779060.44        0.00170  (13092321)
        459371.04   3779060.44        0.00184  (13082423)                459421.04
3779060.44        0.00204  (15081522)
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     L0004172    , L0004173
, L0004174    , L0004175    , L0004176    ,
                  L0004177    , L0004178    , L0004179    , L0004180    , L0004181
, L0004182    , L0004183    , L0004184    ,
                  L0004185    , L0004186    , L0004187    , L0004188    , L0004189
, L0004190    , L0004191    , L0004192    ,
                  L0004193    , L0004194    , L0004195    , L0004196    , L0004197
, L0004198    , L0004199    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
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X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459471.04	3779060.44	0.00229	(13090305)	459521.04	3779060.44	0.00257	(15063020)
459571.04	3779060.44	0.00292	(13090422)	459621.04	3779060.44	0.00334	(13090923)
459671.04	3779060.44	0.00400	(12082102)	459721.04	3779060.44	0.00523	(12092121)
459771.04	3779060.44	0.01038	(16012717)	459271.04	3779110.44	0.00157	(13092321)
459321.04	3779110.44	0.00171	(13092321)	459371.04	3779110.44	0.00186	(12080203)
459421.04	3779110.44	0.00207	(15081522)	459471.04	3779110.44	0.00231	(13090305)
459521.04	3779110.44	0.00260	(15063020)	459571.04	3779110.44	0.00296	(13090422)
459621.04	3779110.44	0.00339	(13090923)	459671.04	3779110.44	0.00403	(15102423)
459721.04	3779110.44	0.00526	(12092121)	459771.04	3779110.44	0.01046	(16012717)
459271.04	3779160.44	0.00158	(13092321)	459321.04	3779160.44	0.00172	(13082423)
459371.04	3779160.44	0.00188	(16070903)	459421.04	3779160.44	0.00209	(15081522)
459471.04	3779160.44	0.00232	(15063020)	459521.04	3779160.44	0.00263	(13090422)
459571.04	3779160.44	0.00299	(13090422)	459621.04	3779160.44	0.00342	(13090923)
459671.04	3779160.44	0.00407	(15102423)	459721.04	3779160.44	0.00532	(12092121)
459771.04	3779160.44	0.01050	(16012717)	459271.04	3779210.44	0.00160	(13092321)
459321.04	3779210.44	0.00173	(13082423)	459371.04	3779210.44	0.00189	(16070903)
459421.04	3779210.44	0.00211	(15081522)	459471.04	3779210.44	0.00235	(15063020)
459521.04	3779210.44	0.00266	(13090422)	459571.04	3779210.44	0.00301	(13090422)
459621.04	3779210.44	0.00345	(13090923)	459671.04	3779210.44	0.00413	(15102423)
459721.04	3779210.44	0.00537	(12092121)	459771.04	3779210.44	0.01055	(16012717)
459271.04	3779260.44	0.00161	(13092321)	459321.04			

3779260.44 0.00174 (13082423)
459371.04 3779260.44 0.00191 (15081522) 459421.04
3779260.44 0.00212 (15081522)
459471.04 3779260.44 0.00237 (15063020) 459521.04
3779260.44 0.00269 (13090422)
459571.04 3779260.44 0.00303 (13090422) 459621.04
3779260.44 0.00349 (13090923)
459671.04 3779260.44 0.00420 (15102423) 459721.04
3779260.44 0.00541 (12092121)
459771.04 3779260.44 0.01059 (16012717) 459271.04
3779310.44 0.00162 (13092321)
459321.04 3779310.44 0.00175 (13082423) 459371.04
3779310.44 0.00193 (15081522)
459421.04 3779310.44 0.00213 (13090305) 459471.04
3779310.44 0.00239 (15063020)
459521.04 3779310.44 0.00271 (13090422) 459571.04
3779310.44 0.00304 (13090422)
459621.04 3779310.44 0.00353 (13090923) 459671.04
3779310.44 0.00427 (15102423)
459721.04 3779310.44 0.00546 (12092121) 459771.04
3779310.44 0.01064 (16012717)
459271.04 3779360.44 0.00162 (13082423) 459321.04
3779360.44 0.00175 (16070903)
459371.04 3779360.44 0.00194 (15081522) 459421.04
3779360.44 0.00215 (13090305)
459471.04 3779360.44 0.00241 (15063020) 459521.04
3779360.44 0.00273 (13090422)
459571.04 3779360.44 0.00305 (13090422) 459621.04
3779360.44 0.00357 (13090923)
459671.04 3779360.44 0.00433 (15102423) 459721.04
3779360.44 0.00555 (12092121)
459771.04 3779360.44 0.01072 (16012717) 459271.04
3779410.44 0.00162 (13082423)
459321.04 3779410.44 0.00176 (16070903) 459371.04
3779410.44 0.00195 (15081522)
459421.04 3779410.44 0.00216 (13090305) 459471.04
3779410.44 0.00242 (15063020)
459521.04 3779410.44 0.00275 (13090422) 459571.04
3779410.44 0.00309 (13061801)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION

VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 , L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 , L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 , L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459621.04	3779410.44	0.00361	(13090923)	459671.04	3779410.44	0.00438	(15102423)
459721.04	3779410.44	0.00562	(12092121)	459771.04	3779410.44	0.01076	(16012717)
459271.04	3779460.44	0.00162	(13082423)	459321.04	3779460.44	0.00176	(16070903)
459371.04	3779460.44	0.00196	(15081522)	459421.04	3779460.44	0.00216	(13090305)
459471.04	3779460.44	0.00243	(15063020)	459521.04	3779460.44	0.00276	(13090422)
459571.04	3779460.44	0.00312	(13061801)	459621.04	3779460.44	0.00364	(12082102)
459671.04	3779460.44	0.00444	(15102423)	459721.04	3779460.44	0.00569	(11090423)
459771.04	3779460.44	0.01078	(16012717)	459271.04	3779510.44	0.00162	(13082423)
459321.04	3779510.44	0.00177	(15081522)	459371.04	3779510.44	0.00196	(15081522)
459421.04	3779510.44	0.00217	(15063020)	459471.04	3779510.44	0.00244	(15063020)
459521.04	3779510.44	0.00277	(13090422)	459571.04	3779510.44	0.00313	(13061801)
459621.04	3779510.44	0.00369	(12082102)	459671.04	3779510.44	0.00447	(12092121)
459721.04	3779510.44	0.00576	(11090423)	459771.04	3779510.44	0.01076	(16012717)
459271.04	3779560.44	0.00161	(12080203)	459321.04	3779560.44	0.00177	(15081522)

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        459371.04   3779560.44        0.00195  (15081522)                459421.04
3779560.44        0.00217  (15063020)
        459471.04   3779560.44        0.00243  (13090422)                459521.04
3779560.44        0.00277  (13090422)
        459571.04   3779560.44        0.00314  (13061801)                459621.04
3779560.44        0.00372  (12082102)
        459671.04   3779560.44        0.00453  (12092121)                459721.04
3779560.44        0.00584  (11090423)
        459771.04   3779560.44        0.01061  (16012717)                459271.04
3779610.44        0.00161  (16070903)
        459321.04   3779610.44        0.00177  (15081522)                459371.04
3779610.44        0.00195  (15081522)
        459421.04   3779610.44        0.00217  (15063020)                459471.04
3779610.44        0.00243  (13090422)
        459521.04   3779610.44        0.00277  (13090422)                459571.04
3779610.44        0.00315  (13090923)
        459621.04   3779610.44        0.00374  (12082102)                459671.04
3779610.44        0.00456  (12092121)
        459721.04   3779610.44        0.00595  (11092608)                459771.04
3779610.44        0.01064  (11092608)
        459271.04   3779660.44        0.00160  (16070903)                459321.04
3779660.44        0.00176  (15081522)
        459371.04   3779660.44        0.00194  (13090305)                459421.04
3779660.44        0.00216  (15063020)
        459471.04   3779660.44        0.00243  (13090422)                459521.04
3779660.44        0.00275  (13090422)
        459571.04   3779660.44        0.00314  (13090923)                459621.04
3779660.44        0.00373  (12082102)
        459671.04   3779660.44        0.00458  (12092121)                459721.04
3779660.44        0.00639  (11092608)
        459771.04   3779660.44        0.01276  (11092608)                459271.04
3779710.44        0.00159  (16070903)
        459321.04   3779710.44        0.00175  (15081522)                459371.04
3779710.44        0.00192  (13090305)
        459421.04   3779710.44        0.00215  (15063020)                459471.04
3779710.44        0.00241  (13090422)
        459521.04   3779710.44        0.00273  (13090422)                459571.04
3779710.44        0.00312  (13090923)
        459621.04   3779710.44        0.00370  (12082102)                459671.04
3779710.44        0.00453  (12092121)
        459721.04   3779710.44        0.00590  (11090423)                459771.04
3779710.44        0.01435  (11092608)
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460204.12	3779784.84	0.00126	(16051524)	460254.12	3779784.84	0.00095m	(13112024)
460304.12	3779784.84	0.00077	(12120224)	460204.12	3779834.84	0.00120	(12050124)
460254.12	3779834.84	0.00093	(12050124)	460304.12	3779834.84	0.00078	(12120224)
460204.12	3779884.84	0.00115	(12120224)	460254.12	3779884.84	0.00093	(12120224)
460304.12	3779884.84	0.00079	(12120224)	460204.12	3779934.84	0.00118	(12120224)
460254.12	3779934.84	0.00095	(12120224)	460304.12	3779934.84	0.00079	(12120224)
460204.12	3779984.84	0.00125	(12120224)	460254.12	3779984.84	0.00105	(12120224)
460304.12	3779984.84	0.00088	(12120224)	460204.12	3780034.84	0.00128	(12120224)
460254.12	3780034.84	0.00106	(12120224)	460304.12	3780034.84	0.00093	(12120224)
460204.12	3780084.84	0.00115	(12120224)	460254.12	3780084.84	0.00109	(12120224)
460304.12	3780084.84	0.00100	(12120224)	460204.12	3780134.84	0.00100	(12120224)
460254.12	3780134.84	0.00098	(12120224)	460304.12	3780134.84	0.00094	(12120224)
460204.12	3780184.84	0.00084	(12120224)	460254.12			

```
3780184.84        0.00087  (12120224)
        460304.12   3780184.84        0.00088  (12120224)                460204.12
3780234.84        0.00071  (12120224)
        460254.12   3780234.84        0.00075  (12120224)                460304.12
3780234.84        0.00078  (12120224)
        460204.12   3780284.84        0.00063  (13120724)                460254.12
3780284.84        0.00065  (12120224)
        460304.12   3780284.84        0.00069  (12120224)                460204.12
3780334.84        0.00061  (13120724)
        460254.12   3780334.84        0.00055  (12120224)                460304.12
3780334.84        0.00059  (12120224)
        460204.12   3780384.84        0.00058  (13120724)                460254.12
3780384.84        0.00052  (13120724)
        460304.12   3780384.84        0.00051  (12120224)                460204.12
3780434.84        0.00055  (13120724)
        460254.12   3780434.84        0.00050  (13120724)                460304.12
3780434.84        0.00045  (13120724)
        460204.12   3780484.84        0.00053  (13120724)                460254.12
3780484.84        0.00048  (13120724)
        460304.12   3780484.84        0.00044  (13120724)                460204.12
3780534.84        0.00050  (13120724)
        460254.12   3780534.84        0.00046  (13120724)                460304.12
3780534.84        0.00042  (13120724)
        460054.12   3780584.84        0.00055  (13120724)                460104.12
3780584.84        0.00054  (13120724)
        460204.12   3780584.84        0.00048  (13120724)                460254.12
3780584.84        0.00044  (13120724)
        460304.12   3780584.84        0.00041  (13120724)                460054.12
3780634.84        0.00053  (13120724)
        460104.12   3780634.84        0.00052  (13120724)                460204.12
3780634.84        0.00046  (13120724)
        460254.12   3780634.84        0.00042  (13120724)                460304.12
3780634.84        0.00039  (13120724)
        459854.12   3780684.84        0.00058  (16051824)                459904.12
3780684.84        0.00049  (13120724)
        459954.12   3780684.84        0.00050  (13120724)                460004.12
3780684.84        0.00051  (13120724)
        460054.12   3780684.84        0.00051  (13120724)                460104.12
3780684.84        0.00049  (13120724)
        460204.12   3780684.84        0.00044  (13120724)                460254.12
3780684.84        0.00041  (13120724)
        460304.12   3780684.84        0.00037  (13120724)                459854.12
3780734.84        0.00057  (16051824)
        459904.12   3780734.84        0.00048  (13120724)                459954.12
3780734.84        0.00048  (13120724)
        460004.12   3780734.84        0.00048  (13120724)                460054.12
3780734.84        0.00049  (13120724)
        460104.12   3780734.84        0.00047  (13120724)                460204.12
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3780734.84 0.00042 (13120724)
  460254.12 3780734.84 0.00039 (13120724) 460304.12
3780734.84 0.00036 (13120724)
  459854.12 3780784.84 0.00056 (16051824) 459904.12
3780784.84 0.00046 (13120724)
  459954.12 3780784.84 0.00046 (13120724) 460004.12
3780784.84 0.00046 (13120724)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
  L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
  L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
  L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460054.12	3780784.84	0.00047	(13120724)	460104.12	3780784.84	0.00045	(13120724)
460204.12	3780784.84	0.00041	(13120724)	460254.12	3780784.84	0.00038	(13120724)
460304.12	3780784.84	0.00035	(13120724)	459854.12	3780834.84	0.00055	(16051824)
459904.12	3780834.84	0.00044	(13120724)	459954.12	3780834.84	0.00044	(13120724)
460004.12	3780834.84	0.00045	(13120724)	460054.12	3780834.84	0.00045	(13120724)
460104.12	3780834.84	0.00044	(13120724)	460204.12	3780834.84	0.00039	(13120724)

460254.12 3780834.84 0.00036 (13120724) 460304.12 3780834.84 0.00033 (13120724)
459854.12 3780884.84 0.00054 (16051824) 459904.12 3780884.84 0.00043 (13120724)
459954.12 3780884.84 0.00042 (13120724) 460004.12 3780884.84 0.00043 (13120724)
460054.12 3780884.84 0.00043 (13120724) 460104.12 3780884.84 0.00042 (13120724)
460204.12 3780884.84 0.00038 (13120724) 460254.12 3780884.84 0.00035 (13120724)
460304.12 3780884.84 0.00032 (13120724) 459854.12 3780984.84 0.00052 (16051824)
459904.12 3780984.84 0.00040 (13120724) 459954.12 3780984.84 0.00039 (13120724)
460004.12 3780984.84 0.00040 (13120724) 460054.12 3780984.84 0.00040 (13120724)
460104.12 3780984.84 0.00039 (13120724) 460204.12 3780984.84 0.00035 (13120724)
460254.12 3780984.84 0.00033 (13120724) 460304.12 3780984.84 0.00031 (13120724)
459854.12 3781034.84 0.00051 (16051824) 459904.12 3781034.84 0.00039 (13120724)
459954.12 3781034.84 0.00038 (13120724) 460004.12 3781034.84 0.00038 (13120724)
460054.12 3781034.84 0.00039 (13120724) 460104.12 3781034.84 0.00038 (13120724)
460204.12 3781034.84 0.00034 (13120724) 460254.12 3781034.84 0.00032 (13120724)
460304.12 3781034.84 0.00029 (13120724) 459854.12 3781084.84 0.00050 (16051824)
459904.12 3781084.84 0.00038 (16051824) 459954.12 3781084.84 0.00036 (13120724)
460004.12 3781084.84 0.00037 (13120724) 460054.12 3781084.84 0.00037 (13120724)
460104.12 3781084.84 0.00037 (13120724) 460204.12 3781084.84 0.00033 (13120724)
460254.12 3781084.84 0.00031 (13120724) 460304.12 3781084.84 0.00028 (13120724)
459854.12 3781134.84 0.00049 (16051824) 459904.12 3781134.84 0.00037 (16051824)
459954.12 3781134.84 0.00035 (13120724) 460004.12 3781134.84 0.00036 (13120724)
460054.12 3781134.84 0.00036 (13120724) 460104.12 3781134.84 0.00036 (13120724)
460204.12 3781134.84 0.00032 (13120724) 460254.12 3781134.84 0.00030 (13120724)
460304.12 3781134.84 0.00028 (13120724) 459854.12 3781184.84 0.00048 (16051824)

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        459904.12   3781184.84        0.00036  (16051824)                459954.12
3781184.84        0.00034  (13120724)
        460004.12   3781184.84        0.00035  (13120724)                460054.12
3781184.84        0.00035  (13120724)
        460104.12   3781184.84        0.00035  (13120724)                460204.12
3781184.84        0.00032  (13120724)
        460254.12   3781184.84        0.00029  (13120724)                460304.12
3781184.84        0.00027  (13120724)
        459854.12   3781234.84        0.00047  (16051824)                459904.12
3781234.84        0.00036  (16051824)
        459954.12   3781234.84        0.00033  (13120724)                460004.12
3781234.84        0.00033  (13120724)
        460054.12   3781234.84        0.00034  (13120724)                460104.12
3781234.84        0.00034  (13120724)
        460204.12   3781234.84        0.00031  (13120724)                460254.12
3781234.84        0.00029  (13120724)
        460304.12   3781234.84        0.00026  (13120724)                459854.12
3781284.84        0.00046  (16051824)
        459904.12   3781284.84        0.00035  (16051824)                459954.12
3781284.84        0.00032  (13120724)
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0004172    , L0004173
, L0004174    , L0004175    , L0004176    ,
                  L0004177    , L0004178    , L0004179    , L0004180    , L0004181
, L0004182    , L0004183    , L0004184    ,
                  L0004185    , L0004186    , L0004187    , L0004188    , L0004189
, L0004190    , L0004191    , L0004192    ,
                  L0004193    , L0004194    , L0004195    , L0004196    , L0004197
, L0004198    , L0004199    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                          ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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460004.12	3781284.84	0.00032	(13120724)	460054.12	3781284.84	0.00033	(13120724)
460104.12	3781284.84	0.00033	(13120724)	460204.12	3781284.84	0.00030	(13120724)
460254.12	3781284.84	0.00028	(13120724)	460304.12	3781284.84	0.00026	(13120724)
459854.12	3781334.84	0.00046	(16051824)	459904.12	3781334.84	0.00034	(16051824)
459954.12	3781334.84	0.00031	(13120724)	460004.12	3781334.84	0.00031	(13120724)
460054.12	3781334.84	0.00032	(13120724)	460104.12	3781334.84	0.00032	(13120724)
460204.12	3781334.84	0.00029	(13120724)	460254.12	3781334.84	0.00027	(13120724)
460304.12	3781334.84	0.00025	(13120724)	460204.12	3781384.84	0.00029	(13120724)
460254.12	3781384.84	0.00027	(13120724)	460304.12	3781384.84	0.00025	(13120724)
460204.12	3781434.84	0.00028	(13120724)	460254.12	3781434.84	0.00027	(13120724)
460304.12	3781434.84	0.00024	(13120724)	460204.12	3781484.84	0.00028	(13120724)
460254.12	3781484.84	0.00026	(13120724)	460304.12	3781484.84	0.00024	(13120724)
460204.12	3781534.84	0.00027	(13120724)	460254.12	3781534.84	0.00026	(13120724)
460304.12	3781534.84	0.00023	(13120724)	460204.12	3781584.84	0.00027	(13120724)
460254.12	3781584.84	0.00025	(13120724)	460304.12	3781584.84	0.00023	(13120724)
460204.12	3781634.84	0.00026	(13120724)	460254.12	3781634.84	0.00025	(13120724)
460304.12	3781634.84	0.00023	(13120724)	460204.12	3781684.84	0.00026	(13120724)
460254.12	3781684.84	0.00024	(13120724)	460304.12	3781684.84	0.00023	(13120724)
460204.12	3781734.84	0.00025	(13120724)	460254.12	3781734.84	0.00024	(13120724)
460349.55	3779783.46	0.00069	(12120224)	460399.55	3779783.46	0.00063	(12120224)
460449.55	3779783.46	0.00058	(12120224)	460499.55	3779783.46	0.00054	(12120224)
460349.55	3779833.46	0.00070	(12120224)	460399.55	3779833.46	0.00063	(12120224)
460449.55	3779833.46	0.00058	(12120224)	460499.55	3779833.46	0.00054	(12120224)
460349.55	3779883.46	0.00070	(12120224)	460399.55

3779883.46 0.00063 (12120224)
  460449.55 3779883.46 0.00058 (12120224) 460499.55
3779883.46 0.00054 (12120224)
  460349.55 3779933.46 0.00070 (12120224) 460399.55
3779933.46 0.00063 (12120224)
  460449.55 3779933.46 0.00058 (12120224) 460499.55
3779933.46 0.00054 (12120224)
  460349.55 3779983.46 0.00071 (12120224) 460399.55
3779983.46 0.00064 (12120224)
  460449.55 3779983.46 0.00058 (12120224) 460499.55
3779983.46 0.00053 (12120224)
  460349.55 3780033.46 0.00082 (12120224) 460399.55
3780033.46 0.00071 (12120224)
  460449.55 3780033.46 0.00065 (12120224) 460499.55
3780033.46 0.00058 (12120224)
  460349.55 3780083.46 0.00090 (12120224) 460399.55
3780083.46 0.00079 (12120224)
  460449.55 3780083.46 0.00068 (12120224) 460499.55
3780083.46 0.00061 (12120224)
  460349.55 3780133.46 0.00088 (12120224) 460399.55
3780133.46 0.00080 (12120224)
  460449.55 3780133.46 0.00072 (12120224) 460499.55
3780133.46 0.00065 (12120224)
  460349.55 3780183.46 0.00086 (12120224) 460399.55
3780183.46 0.00081 (12120224)
  460449.55 3780183.46 0.00074 (12120224) 460499.55
3780183.46 0.00068 (12120224)
  460349.55 3780233.46 0.00078 (12120224) 460399.55
3780233.46 0.00076 (12120224)
  460449.55 3780233.46 0.00072 (12120224) 460499.55
3780233.46 0.00067 (12120224)
  460349.55 3780283.46 0.00071 (12120224) 460399.55
3780283.46 0.00071 (12120224)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
  L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
  L0004185 , L0004186 , L0004187 , L0004188 , L0004189

, L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197
, L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460449.55	3780283.46	0.00069	(12120224)	460499.55	3780283.46	0.00067	(12120224)
460349.55	3780333.46	0.00063	(12120224)	460399.55	3780333.46	0.00065	(12120224)
460449.55	3780333.46	0.00065	(12120224)	460499.55	3780333.46	0.00064	(12120224)
460349.55	3780383.46	0.00055	(12120224)	460399.55	3780383.46	0.00058	(12120224)
460449.55	3780383.46	0.00059	(12120224)	460499.55	3780383.46	0.00059	(12120224)
460349.55	3780433.46	0.00048	(12120224)	460399.55	3780433.46	0.00051	(12120224)
460449.55	3780433.46	0.00053	(12120224)	460499.55	3780433.46	0.00055	(12120224)
460349.55	3780483.46	0.00042	(12120224)	460399.55	3780483.46	0.00045	(12120224)
460449.55	3780483.46	0.00047	(12120224)	460499.55	3780483.46	0.00049	(12120224)
459759.10	3781514.42	0.00050	(16121124)	459711.33	3781514.42	0.00030	(16051824)
459726.24	3781543.22	0.00033	(16051824)	459271.04	3777660.44	0.00040m	(15010924)
459321.04	3777660.44	0.00045m	(15010924)	459371.04	3777660.44	0.00050m	(15010924)
459271.04	3777710.44	0.00041m	(15010924)	459321.04	3777710.44	0.00046m	(15010924)
459371.04	3777710.44	0.00051m	(15010924)	459421.04	3777710.44	0.00059m	(15010924)
459471.04	3777710.44	0.00068m	(15010924)	459521.04	3777710.44	0.00080m	(15010924)
459271.04	3777760.44	0.00043m	(15010924)	459321.04	3777760.44	0.00047m	(15010924)
459371.04	3777760.44	0.00053m	(15010924)	459421.04	3777760.44	0.00060m	(15010924)

459471.04 3777760.44 0.00070m (15010924) 459521.04 3777760.44 0.00081m (15010924)
459571.04 3777760.44 0.00099m (15010924) 459621.04 3777760.44 0.00126m (15010924)
459671.04 3777760.44 0.00170m (15010924) 459721.04 3777760.44 0.00266m (15010924)
459771.04 3777760.44 0.00666 (16121124) 459271.04 3777810.44 0.00044m (15010924)
459321.04 3777810.44 0.00049m (15010924) 459371.04 3777810.44 0.00054m (15010924)
459421.04 3777810.44 0.00061m (15010924) 459471.04 3777810.44 0.00071m (15010924)
459521.04 3777810.44 0.00083m (15010924) 459571.04 3777810.44 0.00101m (15010924)
459621.04 3777810.44 0.00128m (15010924) 459671.04 3777810.44 0.00172m (15010924)
459721.04 3777810.44 0.00268m (15010924) 459771.04 3777810.44 0.00663 (16121124)
459271.04 3777860.44 0.00044m (15010924) 459321.04 3777860.44 0.00049m (15010924)
459371.04 3777860.44 0.00055m (15010924) 459421.04 3777860.44 0.00063m (15010924)
459471.04 3777860.44 0.00071m (15010924) 459521.04 3777860.44 0.00084m (15010924)
459571.04 3777860.44 0.00101m (15010924) 459621.04 3777860.44 0.00128m (15010924)
459671.04 3777860.44 0.00173m (15010924) 459721.04 3777860.44 0.00268m (15010924)
459771.04 3777860.44 0.00659 (16121124) 459271.04 3777910.44 0.00043m (15010924)
459321.04 3777910.44 0.00049m (15010924) 459371.04 3777910.44 0.00056m (15010924)
459421.04 3777910.44 0.00064m (15010924) 459471.04 3777910.44 0.00072m (15010924)
459521.04 3777910.44 0.00084m (15010924) 459571.04 3777910.44 0.00102m (15010924)
459621.04 3777910.44 0.00128m (15010924) 459671.04 3777910.44 0.00173m (15010924)
459721.04 3777910.44 0.00268m (15010924) 459771.04 3777910.44 0.00655 (16121124)
459271.04 3777960.44 0.00044m (15010924) 459321.04 3777960.44 0.00049m (15010924)
459371.04 3777960.44 0.00057m (15010924) 459421.04 3777960.44 0.00064m (15010924)
459471.04 3777960.44 0.00073m (15010924) 459521.04 3777960.44 0.00085m (15010924)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0004172   , L0004173 , L0004174   , L0004175   , L0004176   ,
L0004177   , L0004178   , L0004179   , L0004180   , L0004181 , L0004182   , L0004183   , L0004184   ,
L0004185   , L0004186   , L0004187   , L0004188   , L0004189 , L0004190   , L0004191   , L0004192   ,
L0004193   , L0004194   , L0004195   , L0004196   , L0004197 , L0004198   , L0004199   , . . .   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459571.04	3777960.44	0.00102m	(15010924)	459621.04	3777960.44	0.00129m	(15010924)
459671.04	3777960.44	0.00174m	(15010924)	459721.04	3777960.44	0.00268m	(15010924)
459771.04	3777960.44	0.00650	(16121124)	459271.04	3778010.44	0.00045m	(15010924)
459321.04	3778010.44	0.00051m	(15010924)	459371.04	3778010.44	0.00057m	(15010924)
459421.04	3778010.44	0.00063m	(15010924)	459471.04	3778010.44	0.00073m	(15010924)
459521.04	3778010.44	0.00085m	(15010924)	459571.04	3778010.44	0.00102m	(15010924)
459621.04	3778010.44	0.00129m	(15010924)	459671.04	3778010.44	0.00174m	(15010924)
459721.04	3778010.44	0.00267m	(15010924)	459771.04	3778010.44	0.00646	(16121124)
459271.04	3778060.44	0.00045b	(12121224)	459321.04	3778060.44	0.00051m	(15010924)
459371.04	3778060.44	0.00056m	(15010924)	459421.04	3778060.44	0.00064m	(15010924)
459471.04	3778060.44	0.00073m	(15010924)	459521.04			

3778060.44 0.00086m (15010924)
459571.04 3778060.44 0.00103m (15010924) 459621.04
3778060.44 0.00130m (15010924)
459671.04 3778060.44 0.00174m (15010924) 459721.04
3778060.44 0.00267m (15010924)
459771.04 3778060.44 0.00642 (16121124) 459271.04
3778110.44 0.00046b (12121224)
459321.04 3778110.44 0.00051b (12121224) 459371.04
3778110.44 0.00057m (15010924)
459421.04 3778110.44 0.00064m (15010924) 459471.04
3778110.44 0.00073m (15010924)
459521.04 3778110.44 0.00086m (15010924) 459571.04
3778110.44 0.00103m (15010924)
459621.04 3778110.44 0.00130m (15010924) 459671.04
3778110.44 0.00175m (15010924)
459721.04 3778110.44 0.00268m (15010924) 459771.04
3778110.44 0.00637 (16121124)
459271.04 3778160.44 0.00047b (12121224) 459321.04
3778160.44 0.00052b (12121224)
459371.04 3778160.44 0.00059m (15010924) 459421.04
3778160.44 0.00064m (15010924)
459471.04 3778160.44 0.00074m (15010924) 459521.04
3778160.44 0.00086m (15010924)
459571.04 3778160.44 0.00103m (15010924) 459621.04
3778160.44 0.00131m (15010924)
459671.04 3778160.44 0.00175m (15010924) 459721.04
3778160.44 0.00267m (15010924)
459771.04 3778160.44 0.00633 (16121124) 459271.04
3778210.44 0.00047b (12121224)
459321.04 3778210.44 0.00052b (12121224) 459371.04
3778210.44 0.00059m (15010924)
459421.04 3778210.44 0.00065m (15010924) 459471.04
3778210.44 0.00074b (12121224)
459521.04 3778210.44 0.00087m (15010924) 459571.04
3778210.44 0.00104m (15010924)
459621.04 3778210.44 0.00131m (15010924) 459671.04
3778210.44 0.00175m (15010924)
459721.04 3778210.44 0.00267m (15010924) 459771.04
3778210.44 0.00628 (16121124)
459271.04 3778260.44 0.00048b (12121224) 459321.04
3778260.44 0.00053b (12121224)
459371.04 3778260.44 0.00059m (15010924) 459421.04
3778260.44 0.00065m (15010924)
459471.04 3778260.44 0.00074b (12121224) 459521.04
3778260.44 0.00087m (15010924)
459571.04 3778260.44 0.00104m (15010924) 459621.04
3778260.44 0.00131m (15010924)
459671.04 3778260.44 0.00175m (15010924) 459721.04

3778260.44 0.00267m (15010924)
  459771.04 3778260.44 0.00623 (16121124) 459271.04
3778310.44 0.00048b (12121224)
  459321.04 3778310.44 0.00053b (12121224) 459371.04
3778310.44 0.00058b (12121224)
  459421.04 3778310.44 0.00065m (15010924) 459471.04
3778310.44 0.00075m (15010924)
  459521.04 3778310.44 0.00087m (15010924) 459571.04
3778310.44 0.00105m (15010924)
  459621.04 3778310.44 0.00131m (15010924) 459671.04
3778310.44 0.00174m (15010924)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459721.04	3778310.44	0.00265m	(15010924)	459771.04	3778310.44	0.00619	(16121124)
459271.04	3778360.44	0.00048b	(12121224)	459321.04	3778360.44	0.00053b	(12121224)
459371.04	3778360.44	0.00060m	(15010924)	459421.04	3778360.44	0.00066m	(15010924)
459471.04	3778360.44	0.00076m	(15010924)	459521.04	3778360.44	0.00088m	(15010924)

459571.04 3778360.44 0.00105m (15010924) 459621.04 3778360.44 0.00131m (15010924)
459671.04 3778360.44 0.00174m (15010924) 459721.04 3778360.44 0.00264m (15010924)
459771.04 3778360.44 0.00614 (16121124) 459271.04 3778410.44 0.00049b (12121224)
459321.04 3778410.44 0.00054b (12121224) 459371.04 3778410.44 0.00059b (12121224)
459421.04 3778410.44 0.00066m (15010924) 459471.04 3778410.44 0.00077m (15010924)
459521.04 3778410.44 0.00089m (15010924) 459571.04 3778410.44 0.00105m (15010924)
459621.04 3778410.44 0.00130m (15010924) 459671.04 3778410.44 0.00173m (15010924)
459721.04 3778410.44 0.00263m (15010924) 459771.04 3778410.44 0.00610 (16121124)
459271.04 3778460.44 0.00049b (12121224) 459321.04 3778460.44 0.00054b (12121224)
459371.04 3778460.44 0.00061b (12121224) 459421.04 3778460.44 0.00068b (12121224)
459471.04 3778460.44 0.00076b (12121224) 459521.04 3778460.44 0.00089m (15010924)
459571.04 3778460.44 0.00106m (15010924) 459621.04 3778460.44 0.00129m (15010924)
459671.04 3778460.44 0.00173m (15010924) 459721.04 3778460.44 0.00261m (15010924)
459771.04 3778460.44 0.00604 (16121124) 459271.04 3778510.44 0.00050b (12121224)
459321.04 3778510.44 0.00055b (12121224) 459371.04 3778510.44 0.00061b (12121224)
459421.04 3778510.44 0.00069b (12121224) 459471.04 3778510.44 0.00078b (12121224)
459521.04 3778510.44 0.00091b (12121224) 459571.04 3778510.44 0.00105m (15010924)
459621.04 3778510.44 0.00129m (15010924) 459671.04 3778510.44 0.00172m (15010924)
459721.04 3778510.44 0.00262m (15010924) 459771.04 3778510.44 0.00601 (16121124)
459271.04 3778560.44 0.00050b (12121224) 459321.04 3778560.44 0.00055b (12121224)
459371.04 3778560.44 0.00061b (12121224) 459421.04 3778560.44 0.00068b (12121224)
459471.04 3778560.44 0.00078b (12121224) 459521.04 3778560.44 0.00090b (12121224)
459571.04 3778560.44 0.00107b (12121224) 459621.04 3778560.44 0.00130b (12121224)
459671.04 3778560.44 0.00171m (15010924) 459721.04 3778560.44 0.00261m (15010924)

```
        459771.04   3778560.44        0.00596  (16121124)                459271.04
3778610.44        0.00049b (12121224)
        459321.04   3778610.44        0.00055b (12121224)                459371.04
3778610.44        0.00061b (12121224)
        459421.04   3778610.44        0.00068b (12121224)                459471.04
3778610.44        0.00077b (12121224)
        459521.04   3778610.44        0.00089b (12121224)                459571.04
3778610.44        0.00107b (12121224)
        459621.04   3778610.44        0.00129b (12121224)                459671.04
3778610.44        0.00171m (15010924)
        459721.04   3778610.44        0.00261m (15010924)                459771.04
3778610.44        0.00592  (16121124)
        459271.04   3778660.44        0.00051b (12121224)                459321.04
3778660.44        0.00056b (12121224)
        459371.04   3778660.44        0.00062b (12121224)                459421.04
3778660.44        0.00070b (12121224)
        459471.04   3778660.44        0.00080b (12121224)                459521.04
3778660.44        0.00091b (12121224)
        459571.04   3778660.44        0.00107b (12121224)                459621.04
3778660.44        0.00129b (12121224)
        459671.04   3778660.44        0.00172m (15010924)                459721.04
3778660.44        0.00260m (15010924)
        459771.04   3778660.44        0.00587  (16121124)                459271.04
3778710.44        0.00051b (12121224)
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        10:59:05

                                   PAGE  81
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     L0004172    , L0004173
, L0004174    , L0004175    , L0004176    ,
                 L0004177    , L0004178    , L0004179    , L0004180    , L0004181
, L0004182    , L0004183    , L0004184    ,
                 L0004185    , L0004186    , L0004187    , L0004188    , L0004189
, L0004190    , L0004191    , L0004192    ,
                 L0004193    , L0004194    , L0004195    , L0004196    , L0004197
, L0004198    , L0004199    ,  . . .      ,

                                        *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                      ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **
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X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459321.04	3778710.44	0.00056b	(12121224)	459371.04	3778710.44	0.00063b	(12121224)
459421.04	3778710.44	0.00070b	(12121224)	459471.04	3778710.44	0.00080b	(12121224)
459521.04	3778710.44	0.00092b	(12121224)	459571.04	3778710.44	0.00107b	(12121224)
459621.04	3778710.44	0.00130b	(12121224)	459671.04	3778710.44	0.00172m	(15010924)
459721.04	3778710.44	0.00259m	(15010924)	459771.04	3778710.44	0.00583	(16121124)
459271.04	3778760.44	0.00051b	(12121224)	459321.04	3778760.44	0.00056b	(12121224)
459371.04	3778760.44	0.00063b	(12121224)	459421.04	3778760.44	0.00071b	(12121224)
459471.04	3778760.44	0.00080b	(12121224)	459521.04	3778760.44	0.00093b	(12121224)
459571.04	3778760.44	0.00108b	(12121224)	459621.04	3778760.44	0.00129b	(12121224)
459671.04	3778760.44	0.00171m	(15010924)	459721.04	3778760.44	0.00258m	(15010924)
459771.04	3778760.44	0.00580	(16121124)	459271.04	3778810.44	0.00051b	(12121224)
459321.04	3778810.44	0.00056b	(12121224)	459371.04	3778810.44	0.00063b	(12121224)
459421.04	3778810.44	0.00071b	(12121224)	459471.04	3778810.44	0.00081b	(12121224)
459521.04	3778810.44	0.00093b	(12121224)	459571.04	3778810.44	0.00108b	(12121224)
459621.04	3778810.44	0.00129b	(12121224)	459671.04	3778810.44	0.00171m	(15010924)
459721.04	3778810.44	0.00258m	(15010924)	459771.04	3778810.44	0.00575	(16121124)
459271.04	3778860.44	0.00051b	(12121224)	459321.04	3778860.44	0.00056b	(12121224)
459371.04	3778860.44	0.00063b	(12121224)	459421.04	3778860.44	0.00071b	(12121224)
459471.04	3778860.44	0.00081b	(12121224)	459521.04	3778860.44	0.00093b	(12121224)
459571.04	3778860.44	0.00107b	(12121224)	459621.04	3778860.44	0.00129b	(12121224)
459671.04	3778860.44	0.00171m	(15010924)	459721.04	3778860.44	0.00258m	(15010924)
459771.04	3778860.44	0.00571	(16121124)	459271.04			

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3778910.44        0.00051b (12121224)
        459321.04   3778910.44        0.00057b (12121224)               459371.04
3778910.44        0.00063b (12121224)
        459421.04   3778910.44        0.00071  (12120324)               459471.04
3778910.44        0.00081  (12120324)
        459521.04   3778910.44        0.00092  (12120324)               459571.04
3778910.44        0.00107b (12121224)
        459621.04   3778910.44        0.00129b (12121224)               459671.04
3778910.44        0.00171m (15010924)
        459721.04   3778910.44        0.00257m (15010924)               459771.04
3778910.44        0.00568  (16121124)
        459271.04   3778960.44        0.00052b (12121224)               459321.04
3778960.44        0.00057b (12121224)
        459371.04   3778960.44        0.00063b (12121224)               459421.04
3778960.44        0.00072  (12120324)
        459471.04   3778960.44        0.00081  (12120324)               459521.04
3778960.44        0.00093b (12121224)
        459571.04   3778960.44        0.00108b (12121224)               459621.04
3778960.44        0.00129b (12121224)
        459671.04   3778960.44        0.00170m (15010924)               459721.04
3778960.44        0.00256m (15010924)
        459771.04   3778960.44        0.00567  (16121124)               459271.04
3779010.44        0.00052b (12121224)
        459321.04   3779010.44        0.00057b (12121224)               459371.04
3779010.44        0.00064b (12121224)
        459421.04   3779010.44        0.00072  (12120324)               459471.04
3779010.44        0.00082  (12120324)
        459521.04   3779010.44        0.00094b (12121224)               459571.04
3779010.44        0.00108b (12121224)
        459621.04   3779010.44        0.00130b (12121224)               459671.04
3779010.44        0.00170m (15010924)
        459721.04   3779010.44        0.00256m (15010924)               459771.04
3779010.44        0.00567  (16121124)
        459271.04   3779060.44        0.00052b (12121224)               459321.04
3779060.44        0.00057b (12121224)
        459371.04   3779060.44        0.00064b (12121224)               459421.04
3779060.44        0.00072  (12120324)
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*** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0004172   , L0004173

, L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181
, L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189
, L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197
, L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459471.04	3779060.44	0.00082b	(12121224)	459521.04	3779060.44	0.00094b	(12121224)
459571.04	3779060.44	0.00109b	(12121224)	459621.04	3779060.44	0.00130b	(12121224)
459671.04	3779060.44	0.00170m	(15010924)	459721.04	3779060.44	0.00256m	(15010924)
459771.04	3779060.44	0.00568	(16121124)	459271.04	3779110.44	0.00052b	(12121224)
459321.04	3779110.44	0.00057b	(12121224)	459371.04	3779110.44	0.00064	(12120324)
459421.04	3779110.44	0.00072	(12120324)	459471.04	3779110.44	0.00082b	(12121224)
459521.04	3779110.44	0.00094b	(12121224)	459571.04	3779110.44	0.00109b	(12121224)
459621.04	3779110.44	0.00130b	(12121224)	459671.04	3779110.44	0.00170m	(15010924)
459721.04	3779110.44	0.00256m	(15010924)	459771.04	3779110.44	0.00569	(16121124)
459271.04	3779160.44	0.00052b	(12121224)	459321.04	3779160.44	0.00058b	(12121224)
459371.04	3779160.44	0.00064b	(12121224)	459421.04	3779160.44	0.00073	(12120324)
459471.04	3779160.44	0.00082b	(12121224)	459521.04	3779160.44	0.00094b	(12121224)
459571.04	3779160.44	0.00110b	(12121224)	459621.04	3779160.44	0.00130b	(12121224)
459671.04	3779160.44	0.00170m	(15010924)	459721.04	3779160.44	0.00257m	(15010924)
459771.04	3779160.44	0.00569	(16121124)	459271.04	3779210.44	0.00052b	(12121224)

459321.04 3779210.44 0.00058b (12121224) 459371.04 3779210.44 0.00065b (12121224)
459421.04 3779210.44 0.00073 (12120324) 459471.04 3779210.44 0.00082b (12121224)
459521.04 3779210.44 0.00095b (12121224) 459571.04 3779210.44 0.00110b (12121224)
459621.04 3779210.44 0.00130b (12121224) 459671.04 3779210.44 0.00170m (15010924)
459721.04 3779210.44 0.00257m (15010924) 459771.04 3779210.44 0.00570 (16121124)
459271.04 3779260.44 0.00052b (12121224) 459321.04 3779260.44 0.00058b (12121224)
459371.04 3779260.44 0.00065b (12121224) 459421.04 3779260.44 0.00073b (12121224)
459471.04 3779260.44 0.00082b (12121224) 459521.04 3779260.44 0.00095b (12121224)
459571.04 3779260.44 0.00110b (12121224) 459621.04 3779260.44 0.00130b (12121224)
459671.04 3779260.44 0.00170m (15010924) 459721.04 3779260.44 0.00257m (15010924)
459771.04 3779260.44 0.00571 (16121124) 459271.04 3779310.44 0.00052b (12121224)
459321.04 3779310.44 0.00058b (12121224) 459371.04 3779310.44 0.00065b (12121224)
459421.04 3779310.44 0.00073b (12121224) 459471.04 3779310.44 0.00082b (12121224)
459521.04 3779310.44 0.00095b (12121224) 459571.04 3779310.44 0.00110b (12121224)
459621.04 3779310.44 0.00131b (12121224) 459671.04 3779310.44 0.00170m (15010924)
459721.04 3779310.44 0.00258m (15010924) 459771.04 3779310.44 0.00572 (16121124)
459271.04 3779360.44 0.00052b (12121224) 459321.04 3779360.44 0.00058b (12121224)
459371.04 3779360.44 0.00064b (12121224) 459421.04 3779360.44 0.00073b (12121224)
459471.04 3779360.44 0.00082b (12121224) 459521.04 3779360.44 0.00095b (12121224)
459571.04 3779360.44 0.00110b (12121224) 459621.04 3779360.44 0.00131b (12121224)
459671.04 3779360.44 0.00170m (15010924) 459721.04 3779360.44 0.00258m (15010924)
459771.04 3779360.44 0.00573 (16121124) 459271.04 3779410.44 0.00052b (12121224)
459321.04 3779410.44 0.00057b (12121224) 459371.04 3779410.44 0.00064b (12121224)
459421.04 3779410.44 0.00072b (12121224) 459471.04 3779410.44 0.00083b (12121224)

459521.04 3779410.44 0.00095b (12121224) 459571.04 3779410.44 0.00110b (12121224)
*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 05/27/20
*** AERMET - VERSION 16216 *** *** 10:59:05

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0004172 , L0004173 , L0004174 , L0004175 , L0004176 ,
L0004177 , L0004178 , L0004179 , L0004180 , L0004181 , L0004182 , L0004183 , L0004184 ,
L0004185 , L0004186 , L0004187 , L0004188 , L0004189 , L0004190 , L0004191 , L0004192 ,
L0004193 , L0004194 , L0004195 , L0004196 , L0004197 , L0004198 , L0004199 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459621.04	3779410.44	0.00132b	(12121224)	459671.04	3779410.44	0.00170m	(15010924)
459721.04	3779410.44	0.00258m	(15010924)	459771.04	3779410.44	0.00575	(16121124)
459271.04	3779460.44	0.00051b	(12121224)	459321.04	3779460.44	0.00057b	(12121224)
459371.04	3779460.44	0.00064b	(12121224)	459421.04	3779460.44	0.00072b	(12121224)
459471.04	3779460.44	0.00082b	(12121224)	459521.04	3779460.44	0.00095b	(12121224)
459571.04	3779460.44	0.00111b	(12121224)	459621.04	3779460.44	0.00132b	(12121224)
459671.04	3779460.44	0.00170m	(15010924)	459721.04	3779460.44	0.00259m	(15010924)
459771.04	3779460.44	0.00578	(16121124)	459271.04	3779510.44	0.00051b	(12121224)
459321.04	3779510.44	0.00057b	(12121224)	459371.04			

```
3779510.44        0.00064b (12121224)
        459421.04   3779510.44        0.00072b (12121224)               459471.04
3779510.44        0.00082b (12121224)
        459521.04   3779510.44        0.00094b (12121224)               459571.04
3779510.44        0.00110b (12121224)
        459621.04   3779510.44        0.00132b (12121224)               459671.04
3779510.44        0.00171m (15010924)
        459721.04   3779510.44        0.00261m (15010924)               459771.04
3779510.44        0.00582  (16121124)
        459271.04   3779560.44        0.00051b (12121224)               459321.04
3779560.44        0.00056b (12121224)
        459371.04   3779560.44        0.00063b (12121224)               459421.04
3779560.44        0.00071b (12121224)
        459471.04   3779560.44        0.00082b (12121224)               459521.04
3779560.44        0.00094b (12121224)
        459571.04   3779560.44        0.00110b (12121224)               459621.04
3779560.44        0.00133b (12121224)
        459671.04   3779560.44        0.00171m (15010924)               459721.04
3779560.44        0.00263m (15010924)
        459771.04   3779560.44        0.00587  (16121124)               459271.04
3779610.44        0.00050b (12121224)
        459321.04   3779610.44        0.00056b (12121224)               459371.04
3779610.44        0.00063b (12121224)
        459421.04   3779610.44        0.00071b (12121224)               459471.04
3779610.44        0.00081b (12121224)
        459521.04   3779610.44        0.00093b (12121224)               459571.04
3779610.44        0.00109b (12121224)
        459621.04   3779610.44        0.00132b (12121224)               459671.04
3779610.44        0.00171m (15010924)
        459721.04   3779610.44        0.00266m (15010924)               459771.04
3779610.44        0.00596  (16121124)
        459271.04   3779660.44        0.00049b (12121224)               459321.04
3779660.44        0.00055b (12121224)
        459371.04   3779660.44        0.00062b (12121224)               459421.04
3779660.44        0.00070b (12121224)
        459471.04   3779660.44        0.00079b (12121224)               459521.04
3779660.44        0.00091b (12121224)
        459571.04   3779660.44        0.00108b (12121224)               459621.04
3779660.44        0.00131b (12121224)
        459671.04   3779660.44        0.00168b (12121224)               459721.04
3779660.44        0.00266m (15010924)
        459771.04   3779660.44        0.00610  (16121124)               459271.04
3779710.44        0.00049b (12121224)
        459321.04   3779710.44        0.00054b (12121224)               459371.04
3779710.44        0.00060b (12121224)
        459421.04   3779710.44        0.00068b (12121224)               459471.04
3779710.44        0.00077b (12121224)
        459521.04   3779710.44        0.00089b (12121224)               459571.04
```

3779710.44 0.00105b (12121224)
  459621.04 3779710.44 0.00127b (12121224) 459671.04
3779710.44 0.00164b (12121224)
  459721.04 3779710.44 0.00257m (15010924) 459771.04
3779710.44 0.00621 (16121124)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00379 AT (459771.04, 3777760.44, 478.41, 478.41, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.00376 AT (459771.04, 3777810.44, 479.63, 479.63, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.00375 AT (459771.04, 3777860.44, 481.30, 481.30, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.00372 AT (459771.04, 3777910.44, 482.30, 482.30, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.00369 AT (459771.04, 3777960.44, 483.54, 483.54, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.00367 AT (459771.04, 3778010.44, 485.30, 485.30, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.00365 AT (459771.04, 3778060.44, 486.50, 486.50, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.00363 AT (459771.04, 3778110.44, 487.36, 487.36, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.00361 AT (459771.04, 3778160.44, 488.84, 488.84, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.00359 AT (459771.04, 3778210.44, 489.84, 489.84, 0.00)	DC	

```
 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***       10:59:05

                                  PAGE  85
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
               **

                                                           DATE
                                            NETWORK
GROUP ID                         AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL       HIGH   1ST HIGH VALUE IS       0.01435  ON 11092608: AT (  459771.04,
3779710.44,   530.64,   530.64,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        05/27/20
 *** AERMET - VERSION  16216 ***   ***
                       ***       10:59:05

                                  PAGE  86
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                *** THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
```

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.00666	ON 16121124: AT (459771.04, 3777760.44, 478.41, 478.41, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 7 Warning Message(s)
A Total of 838 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 40 Calm Hours Identified

A Total of 798 Missing Hours Identified (1.82 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
ME W186 2463 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.50
ME W187 2463 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

```
 MX W438    8800        METQA: Convective Velocity Data Out-of-Range.  KURDAT =
 12010216
 MX W438   11536        METQA: Convective Velocity Data Out-of-Range.  KURDAT =
 12042516
 MX W420   16779        METQA: Wind Speed Out-of-Range.   KURDAT =
 12113003
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
 15010101
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
1 year gap

    ************************************
    *** AERMOD Finishes Successfully ***
    ************************************
```

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.8.3
** Lakes Environmental Software Inc.
** Date: 3/19/2020
** File: C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande_Const_Tier 4\Fontana_Sierra
Casa Grande.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Fontana_Sierra Casa Grande.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Sierra Avenue - SR-210 to Casa Grande
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 0.000011219
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 3
** 459791.705, 3777552.074, 473.30, 3.70, 2.33
```

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** 459798.663, 3778918.242, 508.32, 3.70, 2.33
** 459798.334, 3779742.591, 531.33, 3.70, 2.33
** ------------------------------------------------------------------
   LOCATION L0008261     VOLUME   459791.717 3777554.574 473.25
   LOCATION L0008262     VOLUME   459791.743 3777559.574 473.37
   LOCATION L0008263     VOLUME   459791.768 3777564.574 473.50
   LOCATION L0008264     VOLUME   459791.794 3777569.574 473.62
   LOCATION L0008265     VOLUME   459791.819 3777574.573 473.75
   LOCATION L0008266     VOLUME   459791.845 3777579.573 473.87
   LOCATION L0008267     VOLUME   459791.870 3777584.573 473.99
   LOCATION L0008268     VOLUME   459791.896 3777589.573 474.12
   LOCATION L0008269     VOLUME   459791.921 3777594.573 474.24
   LOCATION L0008270     VOLUME   459791.947 3777599.573 474.37
   LOCATION L0008271     VOLUME   459791.972 3777604.573 474.49
   LOCATION L0008272     VOLUME   459791.997 3777609.573 474.62
   LOCATION L0008273     VOLUME   459792.023 3777614.573 474.74
   LOCATION L0008274     VOLUME   459792.048 3777619.573 474.87
   LOCATION L0008275     VOLUME   459792.074 3777624.573 474.99
   LOCATION L0008276     VOLUME   459792.099 3777629.573 475.11
   LOCATION L0008277     VOLUME   459792.125 3777634.573 475.23
   LOCATION L0008278     VOLUME   459792.150 3777639.573 475.34
   LOCATION L0008279     VOLUME   459792.176 3777644.573 475.46
   LOCATION L0008280     VOLUME   459792.201 3777649.572 475.57
   LOCATION L0008281     VOLUME   459792.227 3777654.572 475.69
   LOCATION L0008282     VOLUME   459792.252 3777659.572 475.80
   LOCATION L0008283     VOLUME   459792.278 3777664.572 475.92
   LOCATION L0008284     VOLUME   459792.303 3777669.572 476.04
   LOCATION L0008285     VOLUME   459792.329 3777674.572 476.16
   LOCATION L0008286     VOLUME   459792.354 3777679.572 476.28
   LOCATION L0008287     VOLUME   459792.379 3777684.572 476.40
   LOCATION L0008288     VOLUME   459792.405 3777689.572 476.51
   LOCATION L0008289     VOLUME   459792.430 3777694.572 476.63
   LOCATION L0008290     VOLUME   459792.456 3777699.572 476.75
   LOCATION L0008291     VOLUME   459792.481 3777704.572 476.86
   LOCATION L0008292     VOLUME   459792.507 3777709.572 476.98
   LOCATION L0008293     VOLUME   459792.532 3777714.572 477.10
   LOCATION L0008294     VOLUME   459792.558 3777719.572 477.22
   LOCATION L0008295     VOLUME   459792.583 3777724.572 477.34
   LOCATION L0008296     VOLUME   459792.609 3777729.571 477.47
   LOCATION L0008297     VOLUME   459792.634 3777734.571 477.60
   LOCATION L0008298     VOLUME   459792.660 3777739.571 477.73
   LOCATION L0008299     VOLUME   459792.685 3777744.571 477.86
   LOCATION L0008300     VOLUME   459792.711 3777749.571 477.98
   LOCATION L0008301     VOLUME   459792.736 3777754.571 478.11
   LOCATION L0008302     VOLUME   459792.761 3777759.571 478.25
   LOCATION L0008303     VOLUME   459792.787 3777764.571 478.38
   LOCATION L0008304     VOLUME   459792.812 3777769.571 478.51
   LOCATION L0008305     VOLUME   459792.838 3777774.571 478.64
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LOCATION L0008306     VOLUME   459792.863 3777779.571 478.77
LOCATION L0008307     VOLUME   459792.889 3777784.571 478.90
LOCATION L0008308     VOLUME   459792.914 3777789.571 479.02
LOCATION L0008309     VOLUME   459792.940 3777794.571 479.15
LOCATION L0008310     VOLUME   459792.965 3777799.571 479.28
LOCATION L0008311     VOLUME   459792.991 3777804.570 479.41
LOCATION L0008312     VOLUME   459793.016 3777809.570 479.53
LOCATION L0008313     VOLUME   459793.042 3777814.570 479.68
LOCATION L0008314     VOLUME   459793.067 3777819.570 479.83
LOCATION L0008315     VOLUME   459793.093 3777824.570 479.98
LOCATION L0008316     VOLUME   459793.118 3777829.570 480.13
LOCATION L0008317     VOLUME   459793.143 3777834.570 480.28
LOCATION L0008318     VOLUME   459793.169 3777839.570 480.43
LOCATION L0008319     VOLUME   459793.194 3777844.570 480.57
LOCATION L0008320     VOLUME   459793.220 3777849.570 480.69
LOCATION L0008321     VOLUME   459793.245 3777854.570 480.81
LOCATION L0008322     VOLUME   459793.271 3777859.570 480.93
LOCATION L0008323     VOLUME   459793.296 3777864.570 481.06
LOCATION L0008324     VOLUME   459793.322 3777869.570 481.18
LOCATION L0008325     VOLUME   459793.347 3777874.570 481.30
LOCATION L0008326     VOLUME   459793.373 3777879.569 481.43
LOCATION L0008327     VOLUME   459793.398 3777884.569 481.55
LOCATION L0008328     VOLUME   459793.424 3777889.569 481.68
LOCATION L0008329     VOLUME   459793.449 3777894.569 481.80
LOCATION L0008330     VOLUME   459793.475 3777899.569 481.93
LOCATION L0008331     VOLUME   459793.500 3777904.569 482.05
LOCATION L0008332     VOLUME   459793.525 3777909.569 482.16
LOCATION L0008333     VOLUME   459793.551 3777914.569 482.28
LOCATION L0008334     VOLUME   459793.576 3777919.569 482.39
LOCATION L0008335     VOLUME   459793.602 3777924.569 482.51
LOCATION L0008336     VOLUME   459793.627 3777929.569 482.62
LOCATION L0008337     VOLUME   459793.653 3777934.569 482.74
LOCATION L0008338     VOLUME   459793.678 3777939.569 482.87
LOCATION L0008339     VOLUME   459793.704 3777944.569 483.01
LOCATION L0008340     VOLUME   459793.729 3777949.569 483.15
LOCATION L0008341     VOLUME   459793.755 3777954.569 483.28
LOCATION L0008342     VOLUME   459793.780 3777959.568 483.42
LOCATION L0008343     VOLUME   459793.806 3777964.568 483.55
LOCATION L0008344     VOLUME   459793.831 3777969.568 483.71
LOCATION L0008345     VOLUME   459793.857 3777974.568 483.87
LOCATION L0008346     VOLUME   459793.882 3777979.568 484.03
LOCATION L0008347     VOLUME   459793.908 3777984.568 484.18
LOCATION L0008348     VOLUME   459793.933 3777989.568 484.34
LOCATION L0008349     VOLUME   459793.958 3777994.568 484.50
LOCATION L0008350     VOLUME   459793.984 3777999.568 484.64
LOCATION L0008351     VOLUME   459794.009 3778004.568 484.77
LOCATION L0008352     VOLUME   459794.035 3778009.568 484.90
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LOCATION L0008678     VOLUME   459798.375 3779639.556 528.05
LOCATION L0008679     VOLUME   459798.373 3779644.556 528.21
LOCATION L0008680     VOLUME   459798.371 3779649.556 528.37
LOCATION L0008681     VOLUME   459798.369 3779654.556 528.53
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LOCATION L0008683     VOLUME   459798.365 3779664.556 528.85
LOCATION L0008684     VOLUME   459798.363 3779669.556 529.01
LOCATION L0008685     VOLUME   459798.361 3779674.556 529.18
LOCATION L0008686     VOLUME   459798.359 3779679.556 529.34
LOCATION L0008687     VOLUME   459798.357 3779684.556 529.51
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   LOCATION L0008695     VOLUME   459798.341 3779724.556 530.79
   LOCATION L0008696     VOLUME   459798.339 3779729.556 530.92
   LOCATION L0008697     VOLUME   459798.337 3779734.556 531.06
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** PREFIX
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** Configuration = Adjacent
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** Source Parameters **
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   SRCPARAM L0009578     0.0000501818      3.06     13.95      2.85
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   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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RE FINISHED
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** AERMOD Meteorology Pathway
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   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
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** AERMOD Output Pathway
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OU STARTING
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   PLOTFILE 24 ALL 1ST "Fontana_Sierra Casa Grande.AD\24H1GALL.PLT" 32
   PLOTFILE ANNUAL ALL "Fontana_Sierra Casa Grande.AD\AN00GALL.PLT" 33
   SUMMFILE "Fontana_Sierra Casa Grande.sum"
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** Project Parameters
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** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     11
** ZONEINX  0
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** AERMOD Input Produced by:
** AERMOD View Ver. 9.8.3
** Lakes Environmental Software Inc.
** Date: 3/19/2020
** File: C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande_Const_Tier 4\Fontana_Sierra
Casa Grande.ADI
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** AERMOD Control Pathway
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   AVERTIME 1 24 ANNUAL
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
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CO FINISHED
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** AERMOD Source Pathway
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SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** LINE VOLUME Source ID = SLINE2
** DESCRSRC Sierra Avenue - SR-210 to Casa Grande
** PREFIX
** Length of Side = 5.00
** Configuration = Adjacent
** Emission Rate = 0.000011219
** Vertical Dimension = 6.22
** SZINIT = 2.89
** Nodes = 3
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   LOCATION L0008269     VOLUME   459791.921 3777594.573 474.24
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LOCATION L0008528     VOLUME   459798.517 3778889.556 507.70
LOCATION L0008529     VOLUME   459798.543 3778894.556 507.81
LOCATION L0008530     VOLUME   459798.568 3778899.556 507.92
LOCATION L0008531     VOLUME   459798.593 3778904.556 508.03
LOCATION L0008532     VOLUME   459798.619 3778909.556 508.14
LOCATION L0008533     VOLUME   459798.644 3778914.556 508.25
LOCATION L0008534     VOLUME   459798.663 3778919.556 508.36
LOCATION L0008535     VOLUME   459798.661 3778924.556 508.49
LOCATION L0008536     VOLUME   459798.659 3778929.556 508.63
LOCATION L0008537     VOLUME   459798.657 3778934.556 508.76
LOCATION L0008538     VOLUME   459798.655 3778939.556 508.90
LOCATION L0008539     VOLUME   459798.653 3778944.556 509.03
LOCATION L0008540     VOLUME   459798.651 3778949.556 509.17
LOCATION L0008541     VOLUME   459798.649 3778954.556 509.31
LOCATION L0008542     VOLUME   459798.647 3778959.556 509.45
LOCATION L0008543     VOLUME   459798.645 3778964.556 509.59
LOCATION L0008544     VOLUME   459798.643 3778969.556 509.73
LOCATION L0008545     VOLUME   459798.641 3778974.556 509.87
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LOCATION L0008547     VOLUME   459798.637 3778984.556 510.15
LOCATION L0008548     VOLUME   459798.635 3778989.556 510.29
LOCATION L0008549     VOLUME   459798.633 3778994.556 510.43
LOCATION L0008550     VOLUME   459798.631 3778999.556 510.58
LOCATION L0008551     VOLUME   459798.629 3779004.556 510.72
LOCATION L0008552     VOLUME   459798.627 3779009.556 510.86
LOCATION L0008553     VOLUME   459798.625 3779014.556 511.01
LOCATION L0008554     VOLUME   459798.623 3779019.556 511.15
LOCATION L0008555     VOLUME   459798.621 3779024.556 511.30
LOCATION L0008556     VOLUME   459798.619 3779029.556 511.44
LOCATION L0008557     VOLUME   459798.617 3779034.556 511.58
LOCATION L0008558     VOLUME   459798.615 3779039.556 511.73
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LOCATION L0008570     VOLUME   459798.591 3779099.556 513.44
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LOCATION L0008593     VOLUME   459798.545 3779214.556 516.19
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LOCATION L0008634     VOLUME   459798.463 3779419.556 521.71
LOCATION L0008635     VOLUME   459798.461 3779424.556 521.85
LOCATION L0008636     VOLUME   459798.459 3779429.556 521.98
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LOCATION L0008641     VOLUME   459798.449 3779454.556 522.69
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LOCATION L0008679     VOLUME   459798.373 3779644.556 528.21
LOCATION L0008680     VOLUME   459798.371 3779649.556 528.37
LOCATION L0008681     VOLUME   459798.369 3779654.556 528.53
LOCATION L0008682     VOLUME   459798.367 3779659.556 528.69
LOCATION L0008683     VOLUME   459798.365 3779664.556 528.85
LOCATION L0008684     VOLUME   459798.363 3779669.556 529.01
LOCATION L0008685     VOLUME   459798.361 3779674.556 529.18
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LOCATION L0008687     VOLUME   459798.357 3779684.556 529.51
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LOCATION L0008689     VOLUME   459798.353 3779694.556 529.83
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   LOCATION L0008692     VOLUME   459798.347 3779709.556 530.32
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   LOCATION L0008696     VOLUME   459798.339 3779729.556 530.92
   LOCATION L0008697     VOLUME   459798.337 3779734.556 531.06
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** LINE VOLUME Source ID = SLINE3
** DESCRSRC On-Site Construction
** PREFIX
** Length of Side = 30.00
** Configuration = Adjacent
** Emission Rate = 0.00276
** Vertical Dimension = 6.12
** SZINIT = 2.85
** Nodes = 15
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** 459902.110, 3779893.547, 535.75, 3.06, 13.95
** 459996.622, 3779885.593, 535.10, 3.06, 13.95
** 459998.061, 3779801.385, 532.96, 3.06, 13.95
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** 460031.168, 3779917.261, 535.28, 3.06, 13.95
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   LOCATION L0009530     VOLUME   459993.244 3779885.877 535.16
   LOCATION L0009531     VOLUME   459997.076 3779858.987 534.44
   LOCATION L0009532     VOLUME   459997.589 3779828.991 533.60
   LOCATION L0009533     VOLUME   459995.671 3779801.390 532.84
   LOCATION L0009534     VOLUME   459965.671 3779801.452 532.93
   LOCATION L0009535     VOLUME   459935.671 3779801.514 532.88
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   LOCATION L0009537     VOLUME   459875.671 3779801.638 532.75
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   LOCATION L0009540     VOLUME   459870.308 3779889.138 535.37
   LOCATION L0009541     VOLUME   459869.312 3779919.121 536.35
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   LOCATION L0009543     VOLUME   459926.750 3779920.045 536.48
   LOCATION L0009544     VOLUME   459956.739 3779919.246 536.39
   LOCATION L0009545     VOLUME   459986.729 3779918.446 536.13
   LOCATION L0009546     VOLUME   460016.718 3779917.646 535.78
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   LOCATION L0009556     VOLUME   459885.265 3779774.825 532.02
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   LOCATION L0009559     VOLUME   459836.287 3779831.155 533.64
   LOCATION L0009560     VOLUME   459836.422 3779861.155 534.42
   LOCATION L0009561     VOLUME   459836.558 3779891.154 535.26
   LOCATION L0009562     VOLUME   459836.694 3779921.154 536.14
   LOCATION L0009563     VOLUME   459836.830 3779951.154 537.00
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   LOCATION L0009573     VOLUME   460066.263 3779956.261 536.56
   LOCATION L0009574     VOLUME   460066.466 3779926.262 535.74
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   LOCATION L0009576     VOLUME   460066.872 3779866.263 533.95
   LOCATION L0009577     VOLUME   460067.075 3779836.264 533.01
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** Source Parameters **
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SRCPARAM	L0008617	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008618	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008619	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008620	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008621	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008622	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008623	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008624	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008625	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008626	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008627	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008628	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008629	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008630	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008631	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008632	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008633	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008634	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008635	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008636	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008637	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008638	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008639	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008640	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008641	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008642	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008643	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008644	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008645	0.00000002561	3.70	2.33	2.89

SRCPARAM	L0008646	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008647	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008648	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008649	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008650	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008651	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008652	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008653	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008654	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008655	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008656	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008657	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008658	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008659	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008660	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008661	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008662	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008663	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008664	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008665	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008666	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008667	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008668	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008669	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008670	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008671	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008672	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008673	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008674	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008675	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008676	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008677	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008678	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008679	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008680	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008681	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008682	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008683	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008684	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008685	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008686	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008687	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008688	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008689	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008690	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008691	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008692	0.00000002561	3.70	2.33	2.89
SRCPARAM	L0008693	0.00000002561	3.70	2.33	2.89

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   SRCPARAM L0008694     0.00000002561      3.70      2.33      2.89
   SRCPARAM L0008695     0.00000002561      3.70      2.33      2.89
   SRCPARAM L0008696     0.00000002561      3.70      2.33      2.89
   SRCPARAM L0008697     0.00000002561      3.70      2.33      2.89
   SRCPARAM L0008698     0.00000002561      3.70      2.33      2.89
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0009525     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009526     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009527     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009528     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009529     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009530     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009531     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009532     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009533     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009534     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009535     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009536     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009537     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009538     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009539     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009540     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009541     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009542     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009543     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009544     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009545     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009546     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009547     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009548     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009549     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009550     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009551     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009552     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009553     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009554     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009555     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009556     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009557     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009558     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009559     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009560     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009561     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009562     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009563     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009564     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009565     0.0000501818      3.06     13.95      2.85
```

```
   SRCPARAM L0009566     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009567     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009568     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009569     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009570     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009571     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009572     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009573     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009574     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009575     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009576     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009577     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009578     0.0000501818      3.06     13.95      2.85
   SRCPARAM L0009579     0.0000501818      3.06     13.95      2.85
** ------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "Fontana_Sierra Casa Grande.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
```

```
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Fontana_Sierra Casa Grande.AD\01H1GALL.PLT" 31
   PLOTFILE 24 ALL 1ST "Fontana_Sierra Casa Grande.AD\24H1GALL.PLT" 32
   PLOTFILE ANNUAL ALL "Fontana_Sierra Casa Grande.AD\AN00GALL.PLT" 33
   SUMMFILE "Fontana_Sierra Casa Grande.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    1096       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187    1096       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 *********************************
 *** SETUP Finishes Successfully ***
 *********************************

 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17

                                  PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                             ***     MODEL SETUP OPTIONS SUMMARY
 ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.
```

```
  --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for   493 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_10

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:    493 Source(s);       1 Source Group(s); and     554
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    493 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
```

Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 367.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ;
Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.8 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: Fontana_Sierra Casa Grande.err

**File for Summary of Results: Fontana_Sierra Casa Grande.sum

*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 03/19/20
*** AERMET - VERSION 16216 *** *** *** 16:11:17

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY

- - - - - - - - - - - - - - - - - - - -

L0008261	0	0.25610E-07	459791.7	3777554.6	473.2	3.70	2.33	2.89 YES
L0008262	0	0.25610E-07	459791.7	3777559.6	473.4	3.70	2.33	2.89 YES
L0008263	0	0.25610E-07	459791.8	3777564.6	473.5	3.70	2.33	2.89 YES
L0008264	0	0.25610E-07	459791.8	3777569.6	473.6	3.70	2.33	2.89 YES
L0008265	0	0.25610E-07	459791.8	3777574.6	473.8	3.70	2.33	2.89 YES
L0008266	0	0.25610E-07	459791.8	3777579.6	473.9	3.70	2.33	2.89 YES
L0008267	0	0.25610E-07	459791.9	3777584.6	474.0	3.70	2.33	2.89 YES
L0008268	0	0.25610E-07	459791.9	3777589.6	474.1	3.70	2.33	2.89 YES
L0008269	0	0.25610E-07	459791.9	3777594.6	474.2	3.70	2.33	2.89 YES
L0008270	0	0.25610E-07	459791.9	3777599.6	474.4	3.70	2.33	2.89 YES
L0008271	0	0.25610E-07	459792.0	3777604.6	474.5	3.70	2.33	2.89 YES
L0008272	0	0.25610E-07	459792.0	3777609.6	474.6	3.70	2.33	2.89 YES
L0008273	0	0.25610E-07	459792.0	3777614.6	474.7	3.70	2.33	2.89 YES
L0008274	0	0.25610E-07	459792.0	3777619.6	474.9	3.70	2.33	2.89 YES
L0008275	0	0.25610E-07	459792.1	3777624.6	475.0	3.70	2.33	2.89 YES
L0008276	0	0.25610E-07	459792.1	3777629.6	475.1	3.70	2.33	2.89 YES
L0008277	0	0.25610E-07	459792.1	3777634.6	475.2	3.70	2.33	2.89 YES
L0008278	0	0.25610E-07	459792.1	3777639.6	475.3	3.70	2.33	2.89 YES
L0008279	0	0.25610E-07	459792.2	3777644.6	475.5	3.70	2.33	2.89 YES
L0008280	0	0.25610E-07	459792.2	3777649.6	475.6	3.70	2.33	2.89 YES
L0008281	0	0.25610E-07	459792.2	3777654.6	475.7	3.70	2.33	2.89 YES
L0008282	0	0.25610E-07	459792.3	3777659.6	475.8	3.70	2.33	2.89 YES
L0008283	0	0.25610E-07	459792.3	3777664.6	475.9	3.70	2.33	2.89 YES

L0008284	0	0.25610E-07	459792.3	3777669.6	476.0	3.70	2.33	2.89 YES
L0008285	0	0.25610E-07	459792.3	3777674.6	476.2	3.70	2.33	2.89 YES
L0008286	0	0.25610E-07	459792.4	3777679.6	476.3	3.70	2.33	2.89 YES
L0008287	0	0.25610E-07	459792.4	3777684.6	476.4	3.70	2.33	2.89 YES
L0008288	0	0.25610E-07	459792.4	3777689.6	476.5	3.70	2.33	2.89 YES
L0008289	0	0.25610E-07	459792.4	3777694.6	476.6	3.70	2.33	2.89 YES
L0008290	0	0.25610E-07	459792.5	3777699.6	476.8	3.70	2.33	2.89 YES
L0008291	0	0.25610E-07	459792.5	3777704.6	476.9	3.70	2.33	2.89 YES
L0008292	0	0.25610E-07	459792.5	3777709.6	477.0	3.70	2.33	2.89 YES
L0008293	0	0.25610E-07	459792.5	3777714.6	477.1	3.70	2.33	2.89 YES
L0008294	0	0.25610E-07	459792.6	3777719.6	477.2	3.70	2.33	2.89 YES
L0008295	0	0.25610E-07	459792.6	3777724.6	477.3	3.70	2.33	2.89 YES
L0008296	0	0.25610E-07	459792.6	3777729.6	477.5	3.70	2.33	2.89 YES
L0008297	0	0.25610E-07	459792.6	3777734.6	477.6	3.70	2.33	2.89 YES
L0008298	0	0.25610E-07	459792.7	3777739.6	477.7	3.70	2.33	2.89 YES
L0008299	0	0.25610E-07	459792.7	3777744.6	477.9	3.70	2.33	2.89 YES
L0008300	0	0.25610E-07	459792.7	3777749.6	478.0	3.70	2.33	2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER PART.	EMISSION RATE (GRAMS/SEC)	X	Y	BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT.	URBAN	EMISSION RATE

SZ	SOURCE ID	SCALAR CATS.	VARY	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
	L0008301	0	0.25610E-07	459792.7	3777754.6	478.1	3.70	2.33	2.89	YES
	L0008302	0	0.25610E-07	459792.8	3777759.6	478.2	3.70	2.33	2.89	YES
	L0008303	0	0.25610E-07	459792.8	3777764.6	478.4	3.70	2.33	2.89	YES
	L0008304	0	0.25610E-07	459792.8	3777769.6	478.5	3.70	2.33	2.89	YES
	L0008305	0	0.25610E-07	459792.8	3777774.6	478.6	3.70	2.33	2.89	YES
	L0008306	0	0.25610E-07	459792.9	3777779.6	478.8	3.70	2.33	2.89	YES
	L0008307	0	0.25610E-07	459792.9	3777784.6	478.9	3.70	2.33	2.89	YES
	L0008308	0	0.25610E-07	459792.9	3777789.6	479.0	3.70	2.33	2.89	YES
	L0008309	0	0.25610E-07	459792.9	3777794.6	479.2	3.70	2.33	2.89	YES
	L0008310	0	0.25610E-07	459793.0	3777799.6	479.3	3.70	2.33	2.89	YES
	L0008311	0	0.25610E-07	459793.0	3777804.6	479.4	3.70	2.33	2.89	YES
	L0008312	0	0.25610E-07	459793.0	3777809.6	479.5	3.70	2.33	2.89	YES
	L0008313	0	0.25610E-07	459793.0	3777814.6	479.7	3.70	2.33	2.89	YES
	L0008314	0	0.25610E-07	459793.1	3777819.6	479.8	3.70	2.33	2.89	YES
	L0008315	0	0.25610E-07	459793.1	3777824.6	480.0	3.70	2.33	2.89	YES
	L0008316	0	0.25610E-07	459793.1	3777829.6	480.1	3.70	2.33	2.89	YES
	L0008317	0	0.25610E-07	459793.1	3777834.6	480.3	3.70	2.33	2.89	YES
	L0008318	0	0.25610E-07	459793.2	3777839.6	480.4	3.70	2.33	2.89	YES
	L0008319	0	0.25610E-07	459793.2	3777844.6	480.6	3.70	2.33	2.89	YES
	L0008320	0	0.25610E-07	459793.2	3777849.6	480.7	3.70	2.33	2.89	YES
	L0008321	0	0.25610E-07	459793.2	3777854.6	480.8	3.70	2.33	2.89	YES

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 L0008322         0   0.25610E-07  459793.3 3777859.6   480.9     3.70     2.33
2.89     YES
 L0008323         0   0.25610E-07  459793.3 3777864.6   481.1     3.70     2.33
2.89     YES
 L0008324         0   0.25610E-07  459793.3 3777869.6   481.2     3.70     2.33
2.89     YES
 L0008325         0   0.25610E-07  459793.3 3777874.6   481.3     3.70     2.33
2.89     YES
 L0008326         0   0.25610E-07  459793.4 3777879.6   481.4     3.70     2.33
2.89     YES
 L0008327         0   0.25610E-07  459793.4 3777884.6   481.6     3.70     2.33
2.89     YES
 L0008328         0   0.25610E-07  459793.4 3777889.6   481.7     3.70     2.33
2.89     YES
 L0008329         0   0.25610E-07  459793.4 3777894.6   481.8     3.70     2.33
2.89     YES
 L0008330         0   0.25610E-07  459793.5 3777899.6   481.9     3.70     2.33
2.89     YES
 L0008331         0   0.25610E-07  459793.5 3777904.6   482.1     3.70     2.33
2.89     YES
 L0008332         0   0.25610E-07  459793.5 3777909.6   482.2     3.70     2.33
2.89     YES
 L0008333         0   0.25610E-07  459793.6 3777914.6   482.3     3.70     2.33
2.89     YES
 L0008334         0   0.25610E-07  459793.6 3777919.6   482.4     3.70     2.33
2.89     YES
 L0008335         0   0.25610E-07  459793.6 3777924.6   482.5     3.70     2.33
2.89     YES
 L0008336         0   0.25610E-07  459793.6 3777929.6   482.6     3.70     2.33
2.89     YES
 L0008337         0   0.25610E-07  459793.7 3777934.6   482.7     3.70     2.33
2.89     YES
 L0008338         0   0.25610E-07  459793.7 3777939.6   482.9     3.70     2.33
2.89     YES
 L0008339         0   0.25610E-07  459793.7 3777944.6   483.0     3.70     2.33
2.89     YES
 L0008340         0   0.25610E-07  459793.7 3777949.6   483.2     3.70     2.33
2.89     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17

                                  PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                  *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC) VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0008341	0	0.25610E-07	459793.8	3777954.6	483.3	3.70	2.33	2.89	YES
L0008342	0	0.25610E-07	459793.8	3777959.6	483.4	3.70	2.33	2.89	YES
L0008343	0	0.25610E-07	459793.8	3777964.6	483.6	3.70	2.33	2.89	YES
L0008344	0	0.25610E-07	459793.8	3777969.6	483.7	3.70	2.33	2.89	YES
L0008345	0	0.25610E-07	459793.9	3777974.6	483.9	3.70	2.33	2.89	YES
L0008346	0	0.25610E-07	459793.9	3777979.6	484.0	3.70	2.33	2.89	YES
L0008347	0	0.25610E-07	459793.9	3777984.6	484.2	3.70	2.33	2.89	YES
L0008348	0	0.25610E-07	459793.9	3777989.6	484.3	3.70	2.33	2.89	YES
L0008349	0	0.25610E-07	459794.0	3777994.6	484.5	3.70	2.33	2.89	YES
L0008350	0	0.25610E-07	459794.0	3777999.6	484.6	3.70	2.33	2.89	YES
L0008351	0	0.25610E-07	459794.0	3778004.6	484.8	3.70	2.33	2.89	YES
L0008352	0	0.25610E-07	459794.0	3778009.6	484.9	3.70	2.33	2.89	YES
L0008353	0	0.25610E-07	459794.1	3778014.6	485.0	3.70	2.33	2.89	YES
L0008354	0	0.25610E-07	459794.1	3778019.6	485.2	3.70	2.33	2.89	YES
L0008355	0	0.25610E-07	459794.1	3778024.6	485.3	3.70	2.33	2.89	YES
L0008356	0	0.25610E-07	459794.1	3778029.6	485.4	3.70	2.33	2.89	YES
L0008357	0	0.25610E-07	459794.2	3778034.6	485.6	3.70	2.33	2.89	YES
L0008358	0	0.25610E-07	459794.2	3778039.6	485.7	3.70	2.33	2.89	YES
L0008359	0	0.25610E-07	459794.2	3778044.6	485.9	3.70	2.33	2.89	YES

L0008360	0	0.25610E-07	459794.2	3778049.6	486.0	3.70	2.33	2.89 YES
L0008361	0	0.25610E-07	459794.3	3778054.6	486.1	3.70	2.33	2.89 YES
L0008362	0	0.25610E-07	459794.3	3778059.6	486.3	3.70	2.33	2.89 YES
L0008363	0	0.25610E-07	459794.3	3778064.6	486.4	3.70	2.33	2.89 YES
L0008364	0	0.25610E-07	459794.3	3778069.6	486.5	3.70	2.33	2.89 YES
L0008365	0	0.25610E-07	459794.4	3778074.6	486.6	3.70	2.33	2.89 YES
L0008366	0	0.25610E-07	459794.4	3778079.6	486.7	3.70	2.33	2.89 YES
L0008367	0	0.25610E-07	459794.4	3778084.6	486.8	3.70	2.33	2.89 YES
L0008368	0	0.25610E-07	459794.4	3778089.6	486.9	3.70	2.33	2.89 YES
L0008369	0	0.25610E-07	459794.5	3778094.6	487.1	3.70	2.33	2.89 YES
L0008370	0	0.25610E-07	459794.5	3778099.6	487.2	3.70	2.33	2.89 YES
L0008371	0	0.25610E-07	459794.5	3778104.6	487.3	3.70	2.33	2.89 YES
L0008372	0	0.25610E-07	459794.5	3778109.6	487.4	3.70	2.33	2.89 YES
L0008373	0	0.25610E-07	459794.6	3778114.6	487.5	3.70	2.33	2.89 YES
L0008374	0	0.25610E-07	459794.6	3778119.6	487.6	3.70	2.33	2.89 YES
L0008375	0	0.25610E-07	459794.6	3778124.6	487.7	3.70	2.33	2.89 YES
L0008376	0	0.25610E-07	459794.6	3778129.6	487.9	3.70	2.33	2.89 YES
L0008377	0	0.25610E-07	459794.7	3778134.6	488.0	3.70	2.33	2.89 YES
L0008378	0	0.25610E-07	459794.7	3778139.6	488.1	3.70	2.33	2.89 YES
L0008379	0	0.25610E-07	459794.7	3778144.6	488.2	3.70	2.33	2.89 YES
L0008380	0	0.25610E-07	459794.7	3778149.6	488.4	3.70	2.33	2.89 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE EMISSION RATE VARY BY
L0008381	0	0.25610E-07	459794.8	3778154.6	488.5	3.70	2.33	2.89	YES
L0008382	0	0.25610E-07	459794.8	3778159.6	488.6	3.70	2.33	2.89	YES
L0008383	0	0.25610E-07	459794.8	3778164.6	488.7	3.70	2.33	2.89	YES
L0008384	0	0.25610E-07	459794.8	3778169.6	488.8	3.70	2.33	2.89	YES
L0008385	0	0.25610E-07	459794.9	3778174.6	488.9	3.70	2.33	2.89	YES
L0008386	0	0.25610E-07	459794.9	3778179.6	489.0	3.70	2.33	2.89	YES
L0008387	0	0.25610E-07	459794.9	3778184.6	489.1	3.70	2.33	2.89	YES
L0008388	0	0.25610E-07	459795.0	3778189.6	489.2	3.70	2.33	2.89	YES
L0008389	0	0.25610E-07	459795.0	3778194.6	489.3	3.70	2.33	2.89	YES
L0008390	0	0.25610E-07	459795.0	3778199.6	489.4	3.70	2.33	2.89	YES
L0008391	0	0.25610E-07	459795.0	3778204.6	489.5	3.70	2.33	2.89	YES
L0008392	0	0.25610E-07	459795.1	3778209.6	489.6	3.70	2.33	2.89	YES
L0008393	0	0.25610E-07	459795.1	3778214.6	489.7	3.70	2.33	2.89	YES
L0008394	0	0.25610E-07	459795.1	3778219.6	489.9	3.70	2.33	2.89	YES
L0008395	0	0.25610E-07	459795.1	3778224.6	490.0	3.70	2.33	2.89	YES
L0008396	0	0.25610E-07	459795.2	3778229.6	490.1	3.70	2.33	2.89	YES
L0008397	0	0.25610E-07	459795.2	3778234.6	490.2	3.70	2.33	2.89	YES

L0008398	0	0.25610E-07	459795.2	3778239.6	490.3	3.70	2.33	2.89 YES
L0008399	0	0.25610E-07	459795.2	3778244.6	490.4	3.70	2.33	2.89 YES
L0008400	0	0.25610E-07	459795.3	3778249.6	490.5	3.70	2.33	2.89 YES
L0008401	0	0.25610E-07	459795.3	3778254.6	490.7	3.70	2.33	2.89 YES
L0008402	0	0.25610E-07	459795.3	3778259.6	490.8	3.70	2.33	2.89 YES
L0008403	0	0.25610E-07	459795.3	3778264.6	490.9	3.70	2.33	2.89 YES
L0008404	0	0.25610E-07	459795.4	3778269.6	491.0	3.70	2.33	2.89 YES
L0008405	0	0.25610E-07	459795.4	3778274.6	491.1	3.70	2.33	2.89 YES
L0008406	0	0.25610E-07	459795.4	3778279.6	491.3	3.70	2.33	2.89 YES
L0008407	0	0.25610E-07	459795.4	3778284.6	491.4	3.70	2.33	2.89 YES
L0008408	0	0.25610E-07	459795.5	3778289.6	491.5	3.70	2.33	2.89 YES
L0008409	0	0.25610E-07	459795.5	3778294.6	491.6	3.70	2.33	2.89 YES
L0008410	0	0.25610E-07	459795.5	3778299.6	491.8	3.70	2.33	2.89 YES
L0008411	0	0.25610E-07	459795.5	3778304.6	491.9	3.70	2.33	2.89 YES
L0008412	0	0.25610E-07	459795.6	3778309.6	492.0	3.70	2.33	2.89 YES
L0008413	0	0.25610E-07	459795.6	3778314.6	492.2	3.70	2.33	2.89 YES
L0008414	0	0.25610E-07	459795.6	3778319.6	492.3	3.70	2.33	2.89 YES
L0008415	0	0.25610E-07	459795.6	3778324.6	492.5	3.70	2.33	2.89 YES
L0008416	0	0.25610E-07	459795.7	3778329.6	492.6	3.70	2.33	2.89 YES
L0008417	0	0.25610E-07	459795.7	3778334.6	492.7	3.70	2.33	2.89 YES
L0008418	0	0.25610E-07	459795.7	3778339.6	492.9	3.70	2.33	2.89 YES
L0008419	0	0.25610E-07	459795.7	3778344.6	493.0	3.70	2.33	2.89 YES
L0008420	0	0.25610E-07	459795.8	3778349.6	493.2	3.70	2.33	2.89 YES

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0008421	0	0.25610E-07	459795.8	3778354.6	493.3	3.70	2.33	2.89	YES	
L0008422	0	0.25610E-07	459795.8	3778359.6	493.5	3.70	2.33	2.89	YES	
L0008423	0	0.25610E-07	459795.8	3778364.6	493.6	3.70	2.33	2.89	YES	
L0008424	0	0.25610E-07	459795.9	3778369.6	493.8	3.70	2.33	2.89	YES	
L0008425	0	0.25610E-07	459795.9	3778374.6	493.9	3.70	2.33	2.89	YES	
L0008426	0	0.25610E-07	459795.9	3778379.6	494.1	3.70	2.33	2.89	YES	
L0008427	0	0.25610E-07	459795.9	3778384.6	494.2	3.70	2.33	2.89	YES	
L0008428	0	0.25610E-07	459796.0	3778389.6	494.3	3.70	2.33	2.89	YES	
L0008429	0	0.25610E-07	459796.0	3778394.6	494.4	3.70	2.33	2.89	YES	
L0008430	0	0.25610E-07	459796.0	3778399.6	494.6	3.70	2.33	2.89	YES	
L0008431	0	0.25610E-07	459796.0	3778404.6	494.7	3.70	2.33	2.89	YES	
L0008432	0	0.25610E-07	459796.1	3778409.6	494.8	3.70	2.33	2.89	YES	
L0008433	0	0.25610E-07	459796.1	3778414.6	494.9	3.70	2.33	2.89	YES	
L0008434	0	0.25610E-07	459796.1	3778419.6	495.1	3.70	2.33	2.89	YES	
L0008435	0	0.25610E-07	459796.1	3778424.6	495.2	3.70	2.33	2.89	YES	

L0008436	0	0.25610E-07	459796.2	3778429.6	495.3	3.70	2.33	2.89 YES
L0008437	0	0.25610E-07	459796.2	3778434.6	495.4	3.70	2.33	2.89 YES
L0008438	0	0.25610E-07	459796.2	3778439.6	495.6	3.70	2.33	2.89 YES
L0008439	0	0.25610E-07	459796.2	3778444.6	495.7	3.70	2.33	2.89 YES
L0008440	0	0.25610E-07	459796.3	3778449.6	495.9	3.70	2.33	2.89 YES
L0008441	0	0.25610E-07	459796.3	3778454.6	496.0	3.70	2.33	2.89 YES
L0008442	0	0.25610E-07	459796.3	3778459.6	496.2	3.70	2.33	2.89 YES
L0008443	0	0.25610E-07	459796.4	3778464.6	496.3	3.70	2.33	2.89 YES
L0008444	0	0.25610E-07	459796.4	3778469.6	496.4	3.70	2.33	2.89 YES
L0008445	0	0.25610E-07	459796.4	3778474.6	496.5	3.70	2.33	2.89 YES
L0008446	0	0.25610E-07	459796.4	3778479.6	496.6	3.70	2.33	2.89 YES
L0008447	0	0.25610E-07	459796.5	3778484.6	496.8	3.70	2.33	2.89 YES
L0008448	0	0.25610E-07	459796.5	3778489.6	496.9	3.70	2.33	2.89 YES
L0008449	0	0.25610E-07	459796.5	3778494.6	497.0	3.70	2.33	2.89 YES
L0008450	0	0.25610E-07	459796.5	3778499.6	497.2	3.70	2.33	2.89 YES
L0008451	0	0.25610E-07	459796.6	3778504.6	497.3	3.70	2.33	2.89 YES
L0008452	0	0.25610E-07	459796.6	3778509.6	497.5	3.70	2.33	2.89 YES
L0008453	0	0.25610E-07	459796.6	3778514.6	497.6	3.70	2.33	2.89 YES
L0008454	0	0.25610E-07	459796.6	3778519.6	497.8	3.70	2.33	2.89 YES
L0008455	0	0.25610E-07	459796.7	3778524.6	497.9	3.70	2.33	2.89 YES
L0008456	0	0.25610E-07	459796.7	3778529.6	498.1	3.70	2.33	2.89 YES
L0008457	0	0.25610E-07	459796.7	3778534.6	498.2	3.70	2.33	2.89 YES
L0008458	0	0.25610E-07	459796.7	3778539.6	498.4	3.70	2.33	2.89 YES
L0008459	0	0.25610E-07	459796.8	3778544.6	498.5	3.70	2.33	2.89 YES

 L0008460   0   0.25610E-07 459796.8 3778549.6   498.7   3.70   2.33
2.89   YES

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
 -
- -

 L0008461   0   0.25610E-07 459796.8 3778554.6   498.8   3.70   2.33
2.89   YES
 L0008462   0   0.25610E-07 459796.8 3778559.6   499.0   3.70   2.33
2.89   YES
 L0008463   0   0.25610E-07 459796.9 3778564.6   499.1   3.70   2.33
2.89   YES
 L0008464   0   0.25610E-07 459796.9 3778569.6   499.2   3.70   2.33
2.89   YES
 L0008465   0   0.25610E-07 459796.9 3778574.6   499.4   3.70   2.33
2.89   YES
 L0008466   0   0.25610E-07 459796.9 3778579.6   499.5   3.70   2.33
2.89   YES
 L0008467   0   0.25610E-07 459797.0 3778584.6   499.7   3.70   2.33
2.89   YES
 L0008468   0   0.25610E-07 459797.0 3778589.6   499.8   3.70   2.33
2.89   YES
 L0008469   0   0.25610E-07 459797.0 3778594.6   499.9   3.70   2.33
2.89   YES
 L0008470   0   0.25610E-07 459797.0 3778599.6   500.1   3.70   2.33
2.89   YES
 L0008471   0   0.25610E-07 459797.1 3778604.6   500.2   3.70   2.33
2.89   YES
 L0008472   0   0.25610E-07 459797.1 3778609.6   500.4   3.70   2.33
2.89   YES
 L0008473   0   0.25610E-07 459797.1 3778614.6   500.5   3.70   2.33
2.89   YES

L0008474	0	0.25610E-07	459797.1	3778619.6	500.7	3.70	2.33	2.89 YES
L0008475	0	0.25610E-07	459797.2	3778624.6	500.8	3.70	2.33	2.89 YES
L0008476	0	0.25610E-07	459797.2	3778629.6	500.9	3.70	2.33	2.89 YES
L0008477	0	0.25610E-07	459797.2	3778634.6	501.0	3.70	2.33	2.89 YES
L0008478	0	0.25610E-07	459797.2	3778639.6	501.2	3.70	2.33	2.89 YES
L0008479	0	0.25610E-07	459797.3	3778644.6	501.3	3.70	2.33	2.89 YES
L0008480	0	0.25610E-07	459797.3	3778649.6	501.4	3.70	2.33	2.89 YES
L0008481	0	0.25610E-07	459797.3	3778654.6	501.5	3.70	2.33	2.89 YES
L0008482	0	0.25610E-07	459797.3	3778659.6	501.6	3.70	2.33	2.89 YES
L0008483	0	0.25610E-07	459797.4	3778664.6	501.7	3.70	2.33	2.89 YES
L0008484	0	0.25610E-07	459797.4	3778669.6	501.9	3.70	2.33	2.89 YES
L0008485	0	0.25610E-07	459797.4	3778674.6	502.0	3.70	2.33	2.89 YES
L0008486	0	0.25610E-07	459797.4	3778679.6	502.1	3.70	2.33	2.89 YES
L0008487	0	0.25610E-07	459797.5	3778684.6	502.2	3.70	2.33	2.89 YES
L0008488	0	0.25610E-07	459797.5	3778689.6	502.4	3.70	2.33	2.89 YES
L0008489	0	0.25610E-07	459797.5	3778694.6	502.5	3.70	2.33	2.89 YES
L0008490	0	0.25610E-07	459797.5	3778699.6	502.7	3.70	2.33	2.89 YES
L0008491	0	0.25610E-07	459797.6	3778704.6	502.8	3.70	2.33	2.89 YES
L0008492	0	0.25610E-07	459797.6	3778709.6	502.9	3.70	2.33	2.89 YES
L0008493	0	0.25610E-07	459797.6	3778714.6	503.1	3.70	2.33	2.89 YES
L0008494	0	0.25610E-07	459797.7	3778719.6	503.2	3.70	2.33	2.89 YES
L0008495	0	0.25610E-07	459797.7	3778724.6	503.4	3.70	2.33	2.89 YES
L0008496	0	0.25610E-07	459797.7	3778729.6	503.5	3.70	2.33	2.89 YES
L0008497	0	0.25610E-07	459797.7	3778734.6	503.7	3.70	2.33	2.89 YES

```
 L0008498         0   0.25610E-07  459797.8 3778739.6   503.8     3.70     2.33
2.89     YES
 L0008499         0   0.25610E-07  459797.8 3778744.6   503.9     3.70     2.33
2.89     YES
 L0008500         0   0.25610E-07  459797.8 3778749.6   504.1     3.70     2.33
2.89     YES
```



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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0008501         0   0.25610E-07  459797.8 3778754.6   504.2     3.70     2.33
2.89     YES
 L0008502         0   0.25610E-07  459797.9 3778759.6   504.3     3.70     2.33
2.89     YES
 L0008503         0   0.25610E-07  459797.9 3778764.6   504.4     3.70     2.33
2.89     YES
 L0008504         0   0.25610E-07  459797.9 3778769.6   504.6     3.70     2.33
2.89     YES
 L0008505         0   0.25610E-07  459797.9 3778774.6   504.7     3.70     2.33
2.89     YES
 L0008506         0   0.25610E-07  459798.0 3778779.6   504.8     3.70     2.33
2.89     YES
 L0008507         0   0.25610E-07  459798.0 3778784.6   504.9     3.70     2.33
2.89     YES
 L0008508         0   0.25610E-07  459798.0 3778789.6   505.1     3.70     2.33
2.89     YES
 L0008509         0   0.25610E-07  459798.0 3778794.6   505.2     3.70     2.33
2.89     YES
 L0008510         0   0.25610E-07  459798.1 3778799.6   505.3     3.70     2.33
2.89     YES
 L0008511         0   0.25610E-07  459798.1 3778804.6   505.4     3.70     2.33
2.89     YES
```

L0008512	0	0.25610E-07	459798.1	3778809.6	505.6	3.70	2.33	2.89 YES
L0008513	0	0.25610E-07	459798.1	3778814.6	505.7	3.70	2.33	2.89 YES
L0008514	0	0.25610E-07	459798.2	3778819.6	505.8	3.70	2.33	2.89 YES
L0008515	0	0.25610E-07	459798.2	3778824.6	506.0	3.70	2.33	2.89 YES
L0008516	0	0.25610E-07	459798.2	3778829.6	506.1	3.70	2.33	2.89 YES
L0008517	0	0.25610E-07	459798.2	3778834.6	506.2	3.70	2.33	2.89 YES
L0008518	0	0.25610E-07	459798.3	3778839.6	506.4	3.70	2.33	2.89 YES
L0008519	0	0.25610E-07	459798.3	3778844.6	506.5	3.70	2.33	2.89 YES
L0008520	0	0.25610E-07	459798.3	3778849.6	506.6	3.70	2.33	2.89 YES
L0008521	0	0.25610E-07	459798.3	3778854.6	506.8	3.70	2.33	2.89 YES
L0008522	0	0.25610E-07	459798.4	3778859.6	506.9	3.70	2.33	2.89 YES
L0008523	0	0.25610E-07	459798.4	3778864.6	507.0	3.70	2.33	2.89 YES
L0008524	0	0.25610E-07	459798.4	3778869.6	507.2	3.70	2.33	2.89 YES
L0008525	0	0.25610E-07	459798.4	3778874.6	507.3	3.70	2.33	2.89 YES
L0008526	0	0.25610E-07	459798.5	3778879.6	507.4	3.70	2.33	2.89 YES
L0008527	0	0.25610E-07	459798.5	3778884.6	507.6	3.70	2.33	2.89 YES
L0008528	0	0.25610E-07	459798.5	3778889.6	507.7	3.70	2.33	2.89 YES
L0008529	0	0.25610E-07	459798.5	3778894.6	507.8	3.70	2.33	2.89 YES
L0008530	0	0.25610E-07	459798.6	3778899.6	507.9	3.70	2.33	2.89 YES
L0008531	0	0.25610E-07	459798.6	3778904.6	508.0	3.70	2.33	2.89 YES
L0008532	0	0.25610E-07	459798.6	3778909.6	508.1	3.70	2.33	2.89 YES
L0008533	0	0.25610E-07	459798.6	3778914.6	508.2	3.70	2.33	2.89 YES
L0008534	0	0.25610E-07	459798.7	3778919.6	508.4	3.70	2.33	2.89 YES
L0008535	0	0.25610E-07	459798.7	3778924.6	508.5	3.70	2.33	2.89 YES

 L0008536   0   0.25610E-07 459798.7 3778929.6   508.6   3.70   2.33
2.89   YES
 L0008537   0   0.25610E-07 459798.7 3778934.6   508.8   3.70   2.33
2.89   YES
 L0008538   0   0.25610E-07 459798.7 3778939.6   508.9   3.70   2.33
2.89   YES
 L0008539   0   0.25610E-07 459798.7 3778944.6   509.0   3.70   2.33
2.89   YES
 L0008540   0   0.25610E-07 459798.7 3778949.6   509.2   3.70   2.33
2.89   YES

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                    *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
 -
- - - - - - - - - - - - - - - - - - - -

 L0008541   0   0.25610E-07 459798.6 3778954.6   509.3   3.70   2.33
2.89   YES
 L0008542   0   0.25610E-07 459798.6 3778959.6   509.4   3.70   2.33
2.89   YES
 L0008543   0   0.25610E-07 459798.6 3778964.6   509.6   3.70   2.33
2.89   YES
 L0008544   0   0.25610E-07 459798.6 3778969.6   509.7   3.70   2.33
2.89   YES
 L0008545   0   0.25610E-07 459798.6 3778974.6   509.9   3.70   2.33
2.89   YES
 L0008546   0   0.25610E-07 459798.6 3778979.6   510.0   3.70   2.33
2.89   YES
 L0008547   0   0.25610E-07 459798.6 3778984.6   510.2   3.70   2.33
2.89   YES
 L0008548   0   0.25610E-07 459798.6 3778989.6   510.3   3.70   2.33
2.89   YES
 L0008549   0   0.25610E-07 459798.6 3778994.6   510.4   3.70   2.33
2.89   YES

L0008550	0	0.25610E-07	459798.6	3778999.6	510.6	3.70	2.33
2.89	YES						
L0008551	0	0.25610E-07	459798.6	3779004.6	510.7	3.70	2.33
2.89	YES						
L0008552	0	0.25610E-07	459798.6	3779009.6	510.9	3.70	2.33
2.89	YES						
L0008553	0	0.25610E-07	459798.6	3779014.6	511.0	3.70	2.33
2.89	YES						
L0008554	0	0.25610E-07	459798.6	3779019.6	511.2	3.70	2.33
2.89	YES						
L0008555	0	0.25610E-07	459798.6	3779024.6	511.3	3.70	2.33
2.89	YES						
L0008556	0	0.25610E-07	459798.6	3779029.6	511.4	3.70	2.33
2.89	YES						
L0008557	0	0.25610E-07	459798.6	3779034.6	511.6	3.70	2.33
2.89	YES						
L0008558	0	0.25610E-07	459798.6	3779039.6	511.7	3.70	2.33
2.89	YES						
L0008559	0	0.25610E-07	459798.6	3779044.6	511.9	3.70	2.33
2.89	YES						
L0008560	0	0.25610E-07	459798.6	3779049.6	512.0	3.70	2.33
2.89	YES						
L0008561	0	0.25610E-07	459798.6	3779054.6	512.2	3.70	2.33
2.89	YES						
L0008562	0	0.25610E-07	459798.6	3779059.6	512.3	3.70	2.33
2.89	YES						
L0008563	0	0.25610E-07	459798.6	3779064.6	512.5	3.70	2.33
2.89	YES						
L0008564	0	0.25610E-07	459798.6	3779069.6	512.6	3.70	2.33
2.89	YES						
L0008565	0	0.25610E-07	459798.6	3779074.6	512.8	3.70	2.33
2.89	YES						
L0008566	0	0.25610E-07	459798.6	3779079.6	512.9	3.70	2.33
2.89	YES						
L0008567	0	0.25610E-07	459798.6	3779084.6	513.1	3.70	2.33
2.89	YES						
L0008568	0	0.25610E-07	459798.6	3779089.6	513.2	3.70	2.33
2.89	YES						
L0008569	0	0.25610E-07	459798.6	3779094.6	513.3	3.70	2.33
2.89	YES						
L0008570	0	0.25610E-07	459798.6	3779099.6	513.4	3.70	2.33
2.89	YES						
L0008571	0	0.25610E-07	459798.6	3779104.6	513.6	3.70	2.33
2.89	YES						
L0008572	0	0.25610E-07	459798.6	3779109.6	513.7	3.70	2.33
2.89	YES						
L0008573	0	0.25610E-07	459798.6	3779114.6	513.8	3.70	2.33
2.89	YES						

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 L0008574         0   0.25610E-07  459798.6 3779119.6   513.9     3.70     2.33
2.89     YES
 L0008575         0   0.25610E-07  459798.6 3779124.6   514.0     3.70     2.33
2.89     YES
 L0008576         0   0.25610E-07  459798.6 3779129.6   514.1     3.70     2.33
2.89     YES
 L0008577         0   0.25610E-07  459798.6 3779134.6   514.2     3.70     2.33
2.89     YES
 L0008578         0   0.25610E-07  459798.6 3779139.6   514.3     3.70     2.33
2.89     YES
 L0008579         0   0.25610E-07  459798.6 3779144.6   514.4     3.70     2.33
2.89     YES
 L0008580         0   0.25610E-07  459798.6 3779149.6   514.6     3.70     2.33
2.89     YES
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0008581         0   0.25610E-07  459798.6 3779154.6   514.7     3.70     2.33
2.89     YES
 L0008582         0   0.25610E-07  459798.6 3779159.6   514.8     3.70     2.33
2.89     YES
 L0008583         0   0.25610E-07  459798.6 3779164.6   514.9     3.70     2.33
2.89     YES
 L0008584         0   0.25610E-07  459798.6 3779169.6   515.0     3.70     2.33
2.89     YES
 L0008585         0   0.25610E-07  459798.6 3779174.6   515.2     3.70     2.33
2.89     YES
 L0008586         0   0.25610E-07  459798.6 3779179.6   515.3     3.70     2.33
2.89     YES
 L0008587         0   0.25610E-07  459798.6 3779184.6   515.4     3.70     2.33
2.89     YES
```

L0008588	0	0.25610E-07	459798.6	3779189.6	515.5	3.70	2.33	2.89 YES
L0008589	0	0.25610E-07	459798.6	3779194.6	515.7	3.70	2.33	2.89 YES
L0008590	0	0.25610E-07	459798.6	3779199.6	515.8	3.70	2.33	2.89 YES
L0008591	0	0.25610E-07	459798.5	3779204.6	515.9	3.70	2.33	2.89 YES
L0008592	0	0.25610E-07	459798.5	3779209.6	516.1	3.70	2.33	2.89 YES
L0008593	0	0.25610E-07	459798.5	3779214.6	516.2	3.70	2.33	2.89 YES
L0008594	0	0.25610E-07	459798.5	3779219.6	516.3	3.70	2.33	2.89 YES
L0008595	0	0.25610E-07	459798.5	3779224.6	516.4	3.70	2.33	2.89 YES
L0008596	0	0.25610E-07	459798.5	3779229.6	516.6	3.70	2.33	2.89 YES
L0008597	0	0.25610E-07	459798.5	3779234.6	516.7	3.70	2.33	2.89 YES
L0008598	0	0.25610E-07	459798.5	3779239.6	516.8	3.70	2.33	2.89 YES
L0008599	0	0.25610E-07	459798.5	3779244.6	517.0	3.70	2.33	2.89 YES
L0008600	0	0.25610E-07	459798.5	3779249.6	517.1	3.70	2.33	2.89 YES
L0008601	0	0.25610E-07	459798.5	3779254.6	517.2	3.70	2.33	2.89 YES
L0008602	0	0.25610E-07	459798.5	3779259.6	517.3	3.70	2.33	2.89 YES
L0008603	0	0.25610E-07	459798.5	3779264.6	517.5	3.70	2.33	2.89 YES
L0008604	0	0.25610E-07	459798.5	3779269.6	517.6	3.70	2.33	2.89 YES
L0008605	0	0.25610E-07	459798.5	3779274.6	517.8	3.70	2.33	2.89 YES
L0008606	0	0.25610E-07	459798.5	3779279.6	517.9	3.70	2.33	2.89 YES
L0008607	0	0.25610E-07	459798.5	3779284.6	518.0	3.70	2.33	2.89 YES
L0008608	0	0.25610E-07	459798.5	3779289.6	518.2	3.70	2.33	2.89 YES
L0008609	0	0.25610E-07	459798.5	3779294.6	518.3	3.70	2.33	2.89 YES
L0008610	0	0.25610E-07	459798.5	3779299.6	518.5	3.70	2.33	2.89 YES
L0008611	0	0.25610E-07	459798.5	3779304.6	518.6	3.70	2.33	2.89 YES

```
 L0008612         0   0.25610E-07  459798.5 3779309.6   518.8     3.70     2.33
2.89     YES
 L0008613         0   0.25610E-07  459798.5 3779314.6   519.0     3.70     2.33
2.89     YES
 L0008614         0   0.25610E-07  459798.5 3779319.6   519.1     3.70     2.33
2.89     YES
 L0008615         0   0.25610E-07  459798.5 3779324.6   519.3     3.70     2.33
2.89     YES
 L0008616         0   0.25610E-07  459798.5 3779329.6   519.4     3.70     2.33
2.89     YES
 L0008617         0   0.25610E-07  459798.5 3779334.6   519.5     3.70     2.33
2.89     YES
 L0008618         0   0.25610E-07  459798.5 3779339.6   519.7     3.70     2.33
2.89     YES
 L0008619         0   0.25610E-07  459798.5 3779344.6   519.8     3.70     2.33
2.89     YES
 L0008620         0   0.25610E-07  459798.5 3779349.6   520.0     3.70     2.33
2.89     YES
```


*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0008621	0	0.25610E-07	459798.5	3779354.6	520.1	3.70	2.33	2.89	YES	
L0008622	0	0.25610E-07	459798.5	3779359.6	520.2	3.70	2.33	2.89	YES	
L0008623	0	0.25610E-07	459798.5	3779364.6	520.3	3.70	2.33	2.89	YES	
L0008624	0	0.25610E-07	459798.5	3779369.6	520.4	3.70	2.33	2.89	YES	
L0008625	0	0.25610E-07	459798.5	3779374.6	520.5	3.70	2.33	2.89	YES	

L0008626	0	0.25610E-07	459798.5	3779379.6	520.7	3.70	2.33	2.89 YES
L0008627	0	0.25610E-07	459798.5	3779384.6	520.8	3.70	2.33	2.89 YES
L0008628	0	0.25610E-07	459798.5	3779389.6	520.9	3.70	2.33	2.89 YES
L0008629	0	0.25610E-07	459798.5	3779394.6	521.0	3.70	2.33	2.89 YES
L0008630	0	0.25610E-07	459798.5	3779399.6	521.2	3.70	2.33	2.89 YES
L0008631	0	0.25610E-07	459798.5	3779404.6	521.3	3.70	2.33	2.89 YES
L0008632	0	0.25610E-07	459798.5	3779409.6	521.4	3.70	2.33	2.89 YES
L0008633	0	0.25610E-07	459798.5	3779414.6	521.6	3.70	2.33	2.89 YES
L0008634	0	0.25610E-07	459798.5	3779419.6	521.7	3.70	2.33	2.89 YES
L0008635	0	0.25610E-07	459798.5	3779424.6	521.8	3.70	2.33	2.89 YES
L0008636	0	0.25610E-07	459798.5	3779429.6	522.0	3.70	2.33	2.89 YES
L0008637	0	0.25610E-07	459798.5	3779434.6	522.1	3.70	2.33	2.89 YES
L0008638	0	0.25610E-07	459798.5	3779439.6	522.3	3.70	2.33	2.89 YES
L0008639	0	0.25610E-07	459798.5	3779444.6	522.4	3.70	2.33	2.89 YES
L0008640	0	0.25610E-07	459798.5	3779449.6	522.5	3.70	2.33	2.89 YES
L0008641	0	0.25610E-07	459798.4	3779454.6	522.7	3.70	2.33	2.89 YES
L0008642	0	0.25610E-07	459798.4	3779459.6	522.8	3.70	2.33	2.89 YES
L0008643	0	0.25610E-07	459798.4	3779464.6	523.0	3.70	2.33	2.89 YES
L0008644	0	0.25610E-07	459798.4	3779469.6	523.1	3.70	2.33	2.89 YES
L0008645	0	0.25610E-07	459798.4	3779474.6	523.3	3.70	2.33	2.89 YES
L0008646	0	0.25610E-07	459798.4	3779479.6	523.4	3.70	2.33	2.89 YES
L0008647	0	0.25610E-07	459798.4	3779484.6	523.5	3.70	2.33	2.89 YES
L0008648	0	0.25610E-07	459798.4	3779489.6	523.7	3.70	2.33	2.89 YES
L0008649	0	0.25610E-07	459798.4	3779494.6	523.8	3.70	2.33	2.89 YES

```
 L0008650         0   0.25610E-07  459798.4 3779499.6   524.0     3.70     2.33
2.89     YES
 L0008651         0   0.25610E-07  459798.4 3779504.6   524.1     3.70     2.33
2.89     YES
 L0008652         0   0.25610E-07  459798.4 3779509.6   524.2     3.70     2.33
2.89     YES
 L0008653         0   0.25610E-07  459798.4 3779514.6   524.4     3.70     2.33
2.89     YES
 L0008654         0   0.25610E-07  459798.4 3779519.6   524.5     3.70     2.33
2.89     YES
 L0008655         0   0.25610E-07  459798.4 3779524.6   524.7     3.70     2.33
2.89     YES
 L0008656         0   0.25610E-07  459798.4 3779529.6   524.8     3.70     2.33
2.89     YES
 L0008657         0   0.25610E-07  459798.4 3779534.6   524.9     3.70     2.33
2.89     YES
 L0008658         0   0.25610E-07  459798.4 3779539.6   525.1     3.70     2.33
2.89     YES
 L0008659         0   0.25610E-07  459798.4 3779544.6   525.2     3.70     2.33
2.89     YES
 L0008660         0   0.25610E-07  459798.4 3779549.6   525.4     3.70     2.33
2.89     YES
```


*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

```
               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

 L0008661         0   0.25610E-07  459798.4 3779554.6   525.5     3.70     2.33
2.89     YES
 L0008662         0   0.25610E-07  459798.4 3779559.6   525.7     3.70     2.33
2.89     YES
 L0008663         0   0.25610E-07  459798.4 3779564.6   525.8     3.70     2.33
2.89     YES
```

L0008664	0	0.25610E-07	459798.4	3779569.6	526.0	3.70	2.33	2.89 YES
L0008665	0	0.25610E-07	459798.4	3779574.6	526.1	3.70	2.33	2.89 YES
L0008666	0	0.25610E-07	459798.4	3779579.6	526.2	3.70	2.33	2.89 YES
L0008667	0	0.25610E-07	459798.4	3779584.6	526.4	3.70	2.33	2.89 YES
L0008668	0	0.25610E-07	459798.4	3779589.6	526.5	3.70	2.33	2.89 YES
L0008669	0	0.25610E-07	459798.4	3779594.6	526.7	3.70	2.33	2.89 YES
L0008670	0	0.25610E-07	459798.4	3779599.6	526.8	3.70	2.33	2.89 YES
L0008671	0	0.25610E-07	459798.4	3779604.6	527.0	3.70	2.33	2.89 YES
L0008672	0	0.25610E-07	459798.4	3779609.6	527.1	3.70	2.33	2.89 YES
L0008673	0	0.25610E-07	459798.4	3779614.6	527.3	3.70	2.33	2.89 YES
L0008674	0	0.25610E-07	459798.4	3779619.6	527.4	3.70	2.33	2.89 YES
L0008675	0	0.25610E-07	459798.4	3779624.6	527.6	3.70	2.33	2.89 YES
L0008676	0	0.25610E-07	459798.4	3779629.6	527.7	3.70	2.33	2.89 YES
L0008677	0	0.25610E-07	459798.4	3779634.6	527.9	3.70	2.33	2.89 YES
L0008678	0	0.25610E-07	459798.4	3779639.6	528.0	3.70	2.33	2.89 YES
L0008679	0	0.25610E-07	459798.4	3779644.6	528.2	3.70	2.33	2.89 YES
L0008680	0	0.25610E-07	459798.4	3779649.6	528.4	3.70	2.33	2.89 YES
L0008681	0	0.25610E-07	459798.4	3779654.6	528.5	3.70	2.33	2.89 YES
L0008682	0	0.25610E-07	459798.4	3779659.6	528.7	3.70	2.33	2.89 YES
L0008683	0	0.25610E-07	459798.4	3779664.6	528.8	3.70	2.33	2.89 YES
L0008684	0	0.25610E-07	459798.4	3779669.6	529.0	3.70	2.33	2.89 YES
L0008685	0	0.25610E-07	459798.4	3779674.6	529.2	3.70	2.33	2.89 YES
L0008686	0	0.25610E-07	459798.4	3779679.6	529.3	3.70	2.33	2.89 YES
L0008687	0	0.25610E-07	459798.4	3779684.6	529.5	3.70	2.33	2.89 YES

```
 L0008688         0   0.25610E-07  459798.4 3779689.6   529.7     3.70     2.33
2.89     YES
 L0008689         0   0.25610E-07  459798.4 3779694.6   529.8     3.70     2.33
2.89     YES
 L0008690         0   0.25610E-07  459798.4 3779699.6   530.0     3.70     2.33
2.89     YES
 L0008691         0   0.25610E-07  459798.3 3779704.6   530.2     3.70     2.33
2.89     YES
 L0008692         0   0.25610E-07  459798.3 3779709.6   530.3     3.70     2.33
2.89     YES
 L0008693         0   0.25610E-07  459798.3 3779714.6   530.5     3.70     2.33
2.89     YES
 L0008694         0   0.25610E-07  459798.3 3779719.6   530.6     3.70     2.33
2.89     YES
 L0008695         0   0.25610E-07  459798.3 3779724.6   530.8     3.70     2.33
2.89     YES
 L0008696         0   0.25610E-07  459798.3 3779729.6   530.9     3.70     2.33
2.89     YES
 L0008697         0   0.25610E-07  459798.3 3779734.6   531.1     3.70     2.33
2.89     YES
 L0008698         0   0.25610E-07  459798.3 3779739.6   531.2     3.70     2.33
2.89     YES
 L0009525         0   0.50182E-04  459902.4 3779835.0   533.8     3.06    13.95
2.85     YES
 L0009526         0   0.50182E-04  459902.2 3779865.0   534.8     3.06    13.95
2.85     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17

                                  PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0009527         0   0.50182E-04  459903.6 3779893.4   535.7     3.06    13.95
2.85     YES
```

L0009528	0	0.50182E-04	459933.5	3779890.9	535.5	3.06	13.95	2.85 YES
L0009529	0	0.50182E-04	459963.3	3779888.4	535.4	3.06	13.95	2.85 YES
L0009530	0	0.50182E-04	459993.2	3779885.9	535.2	3.06	13.95	2.85 YES
L0009531	0	0.50182E-04	459997.1	3779859.0	534.4	3.06	13.95	2.85 YES
L0009532	0	0.50182E-04	459997.6	3779829.0	533.6	3.06	13.95	2.85 YES
L0009533	0	0.50182E-04	459995.7	3779801.4	532.8	3.06	13.95	2.85 YES
L0009534	0	0.50182E-04	459965.7	3779801.5	532.9	3.06	13.95	2.85 YES
L0009535	0	0.50182E-04	459935.7	3779801.5	532.9	3.06	13.95	2.85 YES
L0009536	0	0.50182E-04	459905.7	3779801.6	532.8	3.06	13.95	2.85 YES
L0009537	0	0.50182E-04	459875.7	3779801.6	532.8	3.06	13.95	2.85 YES
L0009538	0	0.50182E-04	459872.3	3779829.2	533.5	3.06	13.95	2.85 YES
L0009539	0	0.50182E-04	459871.3	3779859.2	534.4	3.06	13.95	2.85 YES
L0009540	0	0.50182E-04	459870.3	3779889.1	535.4	3.06	13.95	2.85 YES
L0009541	0	0.50182E-04	459869.3	3779919.1	536.3	3.06	13.95	2.85 YES
L0009542	0	0.50182E-04	459896.8	3779920.8	536.6	3.06	13.95	2.85 YES
L0009543	0	0.50182E-04	459926.8	3779920.0	536.5	3.06	13.95	2.85 YES
L0009544	0	0.50182E-04	459956.7	3779919.2	536.4	3.06	13.95	2.85 YES
L0009545	0	0.50182E-04	459986.7	3779918.4	536.1	3.06	13.95	2.85 YES
L0009546	0	0.50182E-04	460016.7	3779917.6	535.8	3.06	13.95	2.85 YES
L0009547	0	0.50182E-04	460031.0	3779901.7	535.1	3.06	13.95	2.85 YES
L0009548	0	0.50182E-04	460030.7	3779871.7	534.1	3.06	13.95	2.85 YES
L0009549	0	0.50182E-04	460030.4	3779841.7	533.5	3.06	13.95	2.85 YES
L0009550	0	0.50182E-04	460030.1	3779811.7	532.8	3.06	13.95	2.85 YES
L0009551	0	0.50182E-04	460029.8	3779781.7	532.1	3.06	13.95	2.85 YES

```
 L0009552         0   0.50182E-04  460005.3 3779776.0   532.2     3.06    13.95
2.85     YES
 L0009553         0   0.50182E-04  459975.3 3779775.7   532.3     3.06    13.95
2.85     YES
 L0009554         0   0.50182E-04  459945.3 3779775.4   532.2     3.06    13.95
2.85     YES
 L0009555         0   0.50182E-04  459915.3 3779775.1   532.1     3.06    13.95
2.85     YES
 L0009556         0   0.50182E-04  459885.3 3779774.8   532.0     3.06    13.95
2.85     YES
 L0009557         0   0.50182E-04  459857.5 3779784.6   532.4     3.06    13.95
2.85     YES
 L0009558         0   0.50182E-04  459836.2 3779801.2   532.8     3.06    13.95
2.85     YES
 L0009559         0   0.50182E-04  459836.3 3779831.2   533.6     3.06    13.95
2.85     YES
 L0009560         0   0.50182E-04  459836.4 3779861.2   534.4     3.06    13.95
2.85     YES
 L0009561         0   0.50182E-04  459836.6 3779891.2   535.3     3.06    13.95
2.85     YES
 L0009562         0   0.50182E-04  459836.7 3779921.2   536.1     3.06    13.95
2.85     YES
 L0009563         0   0.50182E-04  459836.8 3779951.2   537.0     3.06    13.95
2.85     YES
 L0009564         0   0.50182E-04  459864.0 3779953.5   537.3     3.06    13.95
2.85     YES
 L0009565         0   0.50182E-04  459894.0 3779953.0   537.5     3.06    13.95
2.85     YES
 L0009566         0   0.50182E-04  459924.0 3779952.5   537.5     3.06    13.95
2.85     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                      ***        16:11:17

                                  PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
 L0009567         0   0.50182E-04  459954.0 3779952.1   537.6     3.06    13.95
2.85     YES
 L0009568         0   0.50182E-04  459984.0 3779951.6   537.4     3.06    13.95
2.85     YES
 L0009569         0   0.50182E-04  460013.9 3779951.2   536.8     3.06    13.95
2.85     YES
 L0009570         0   0.50182E-04  460012.7 3779981.2   537.8     3.06    13.95
2.85     YES
 L0009571         0   0.50182E-04  460035.1 3779987.1   537.6     3.06    13.95
2.85     YES
 L0009572         0   0.50182E-04  460065.0 3779985.3   537.3     3.06    13.95
2.85     YES
 L0009573         0   0.50182E-04  460066.3 3779956.3   536.6     3.06    13.95
2.85     YES
 L0009574         0   0.50182E-04  460066.5 3779926.3   535.7     3.06    13.95
2.85     YES
 L0009575         0   0.50182E-04  460066.7 3779896.3   534.9     3.06    13.95
2.85     YES
 L0009576         0   0.50182E-04  460066.9 3779866.3   533.9     3.06    13.95
2.85     YES
 L0009577         0   0.50182E-04  460067.1 3779836.3   533.0     3.06    13.95
2.85     YES
 L0009578         0   0.50182E-04  460067.3 3779806.3   532.2     3.06    13.95
2.85     YES
 L0009579         0   0.50182E-04  460067.5 3779776.3   531.6     3.06    13.95
2.85     YES
```



```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                          SOURCE IDs
 -----------                                          ----------


  ALL        L0008261    , L0008262    , L0008263    , L0008264    , L0008265    ,
L0008266    , L0008267    , L0008268    ,

             L0008269    , L0008270    , L0008271    , L0008272    , L0008273    ,
L0008274    , L0008275    , L0008276    ,
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L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 ,

L0008285 , L0008286 , L0008287 , L0008288 , L0008289 ,
L0008290 , L0008291 , L0008292 ,

L0008293 , L0008294 , L0008295 , L0008296 , L0008297 ,
L0008298 , L0008299 , L0008300 ,

L0008301 , L0008302 , L0008303 , L0008304 , L0008305 ,
L0008306 , L0008307 , L0008308 ,

L0008309 , L0008310 , L0008311 , L0008312 , L0008313 ,
L0008314 , L0008315 , L0008316 ,

L0008317 , L0008318 , L0008319 , L0008320 , L0008321 ,
L0008322 , L0008323 , L0008324 ,

L0008325 , L0008326 , L0008327 , L0008328 , L0008329 ,
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L0008338 , L0008339 , L0008340 ,

L0008341 , L0008342 , L0008343 , L0008344 , L0008345 ,
L0008346 , L0008347 , L0008348 ,

L0008349 , L0008350 , L0008351 , L0008352 , L0008353 ,
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L0008362 , L0008363 , L0008364 ,

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L0008370 , L0008371 , L0008372 ,

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L0008386 , L0008387 , L0008388 ,

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L0008402 , L0008403 , L0008404 ,

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L0008413 , L0008414 , L0008415 , L0008416 , L0008417 ,
L0008418 , L0008419 , L0008420 ,
*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 03/19/20
*** AERMET - VERSION 16216 *** ***
*** 16:11:17

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0008421 , L0008422 , L0008423 , L0008424 , L0008425 ,
L0008426 , L0008427 , L0008428 ,

L0008429 , L0008430 , L0008431 , L0008432 , L0008433 ,
L0008434 , L0008435 , L0008436 ,

L0008437 , L0008438 , L0008439 , L0008440 , L0008441 ,
L0008442 , L0008443 , L0008444 ,

L0008445 , L0008446 , L0008447 , L0008448 , L0008449 ,
L0008450 , L0008451 , L0008452 ,

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L0008461 , L0008462 , L0008463 , L0008464 , L0008465 ,
L0008466 , L0008467 , L0008468 ,

L0008469 , L0008470 , L0008471 , L0008472 , L0008473 ,
L0008474 , L0008475 , L0008476 ,

L0008477 , L0008478 , L0008479 , L0008480 , L0008481 ,
L0008482 , L0008483 , L0008484 ,

L0008485 , L0008486 , L0008487 , L0008488 , L0008489 ,
L0008490 , L0008491 , L0008492 ,

L0008493 , L0008494 , L0008495 , L0008496 , L0008497 , L0008498 , L0008499 , L0008500 ,

L0008501 , L0008502 , L0008503 , L0008504 , L0008505 , L0008506 , L0008507 , L0008508 ,

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L0008557 , L0008558 , L0008559 , L0008560 , L0008561 , L0008562 , L0008563 , L0008564 ,

L0008565 , L0008566 , L0008567 , L0008568 , L0008569 , L0008570 , L0008571 , L0008572 ,

L0008573 , L0008574 , L0008575 , L0008576 , L0008577 , L0008578 , L0008579 , L0008580 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0008581 , L0008582 , L0008583 , L0008584 , L0008585 ,

L0008586 , L0008587 , L0008588 ,

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L0008594 , L0008595 , L0008596 ,

L0008597 , L0008598 , L0008599 , L0008600 , L0008601 ,
L0008602 , L0008603 , L0008604 ,

L0008605 , L0008606 , L0008607 , L0008608 , L0008609 ,
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L0008613 , L0008614 , L0008615 , L0008616 , L0008617 ,
L0008618 , L0008619 , L0008620 ,

L0008621 , L0008622 , L0008623 , L0008624 , L0008625 ,
L0008626 , L0008627 , L0008628 ,

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L0008634 , L0008635 , L0008636 ,

L0008637 , L0008638 , L0008639 , L0008640 , L0008641 ,
L0008642 , L0008643 , L0008644 ,

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L0008653 , L0008654 , L0008655 , L0008656 , L0008657 ,
L0008658 , L0008659 , L0008660 ,

L0008661 , L0008662 , L0008663 , L0008664 , L0008665 ,
L0008666 , L0008667 , L0008668 ,

L0008669 , L0008670 , L0008671 , L0008672 , L0008673 ,
L0008674 , L0008675 , L0008676 ,

L0008677 , L0008678 , L0008679 , L0008680 , L0008681 ,
L0008682 , L0008683 , L0008684 ,

L0008685 , L0008686 , L0008687 , L0008688 , L0008689 ,
L0008690 , L0008691 , L0008692 ,

L0008693 , L0008694 , L0008695 , L0008696 , L0008697 ,
L0008698 , L0009525 , L0009526 ,

L0009527 , L0009528 , L0009529 , L0009530 , L0009531 ,
L0009532 , L0009533 , L0009534 ,

L0009535 , L0009536 , L0009537 , L0009538 , L0009539 ,

L0009540 , L0009541 , L0009542 ,

L0009543 , L0009544 , L0009545 , L0009546 , L0009547 ,
L0009548 , L0009549 , L0009550 ,

L0009551 , L0009552 , L0009553 , L0009554 , L0009555 ,
L0009556 , L0009557 , L0009558 ,

L0009559 , L0009560 , L0009561 , L0009562 , L0009563 ,
L0009564 , L0009565 , L0009566 ,

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0009567 , L0009568 , L0009569 , L0009570 , L0009571 ,
L0009572 , L0009573 , L0009574 ,

L0009575 , L0009576 , L0009577 , L0009578 , L0009579 ,

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

2035210. L0008261 , L0008262 , L0008263 , L0008264 ,
L0008265 , L0008266 , L0008267 ,
L0008268 ,

L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 ,

L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 ,

L0008285 , L0008286 , L0008287 , L0008288 , L0008289 ,
L0008290 , L0008291 , L0008292 ,

L0008293 , L0008294 , L0008295 , L0008296 , L0008297 ,
L0008298 , L0008299 , L0008300 ,

L0008301 , L0008302 , L0008303 , L0008304 , L0008305 ,
L0008306 , L0008307 , L0008308 ,

L0008309 , L0008310 , L0008311 , L0008312 , L0008313 ,
L0008314 , L0008315 , L0008316 ,

L0008317 , L0008318 , L0008319 , L0008320 , L0008321 ,
L0008322 , L0008323 , L0008324 ,

L0008325 , L0008326 , L0008327 , L0008328 , L0008329 ,
L0008330 , L0008331 , L0008332 ,

L0008333 , L0008334 , L0008335 , L0008336 , L0008337 ,
L0008338 , L0008339 , L0008340 ,

L0008341 , L0008342 , L0008343 , L0008344 , L0008345 ,
L0008346 , L0008347 , L0008348 ,

L0008349 , L0008350 , L0008351 , L0008352 , L0008353 ,
L0008354 , L0008355 , L0008356 ,

L0008357 , L0008358 , L0008359 , L0008360 , L0008361 ,
L0008362 , L0008363 , L0008364 ,

L0008365 , L0008366 , L0008367 , L0008368 , L0008369 ,
L0008370 , L0008371 , L0008372 ,

L0008373 , L0008374 , L0008375 , L0008376 , L0008377 ,
L0008378 , L0008379 , L0008380 ,

L0008381 , L0008382 , L0008383 , L0008384 , L0008385 ,
L0008386 , L0008387 , L0008388 ,

L0008389 , L0008390 , L0008391 , L0008392 , L0008393 ,
L0008394 , L0008395 , L0008396 ,

L0008397 , L0008398 , L0008399 , L0008400 , L0008401 , L0008402 , L0008403 , L0008404 ,

L0008405 , L0008406 , L0008407 , L0008408 , L0008409 , L0008410 , L0008411 , L0008412 ,

L0008413 , L0008414 , L0008415 , L0008416 , L0008417 , L0008418 , L0008419 , L0008420 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0008421 , L0008422 , L0008423 , L0008424 , L0008425 , L0008426 , L0008427 , L0008428 ,

L0008429 , L0008430 , L0008431 , L0008432 , L0008433 , L0008434 , L0008435 , L0008436 ,

L0008437 , L0008438 , L0008439 , L0008440 , L0008441 , L0008442 , L0008443 , L0008444 ,

L0008445 , L0008446 , L0008447 , L0008448 , L0008449 , L0008450 , L0008451 , L0008452 ,

L0008453 , L0008454 , L0008455 , L0008456 , L0008457 , L0008458 , L0008459 , L0008460 ,

L0008461 , L0008462 , L0008463 , L0008464 , L0008465 , L0008466 , L0008467 , L0008468 ,

L0008469 , L0008470 , L0008471 , L0008472 , L0008473 , L0008474 , L0008475 , L0008476 ,

L0008477 , L0008478 , L0008479 , L0008480 , L0008481 , L0008482 , L0008483 , L0008484 ,

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L0008490    , L0008491    , L0008492    ,

             L0008493    , L0008494    , L0008495    , L0008496    , L0008497    ,
L0008498    , L0008499    , L0008500    ,

             L0008501    , L0008502    , L0008503    , L0008504    , L0008505    ,
L0008506    , L0008507    , L0008508    ,

             L0008509    , L0008510    , L0008511    , L0008512    , L0008513    ,
L0008514    , L0008515    , L0008516    ,

             L0008517    , L0008518    , L0008519    , L0008520    , L0008521    ,
L0008522    , L0008523    , L0008524    ,

             L0008525    , L0008526    , L0008527    , L0008528    , L0008529    ,
L0008530    , L0008531    , L0008532    ,

             L0008533    , L0008534    , L0008535    , L0008536    , L0008537    ,
L0008538    , L0008539    , L0008540    ,

             L0008541    , L0008542    , L0008543    , L0008544    , L0008545    ,
L0008546    , L0008547    , L0008548    ,

             L0008549    , L0008550    , L0008551    , L0008552    , L0008553    ,
L0008554    , L0008555    , L0008556    ,

             L0008557    , L0008558    , L0008559    , L0008560    , L0008561    ,
L0008562    , L0008563    , L0008564    ,

             L0008565    , L0008566    , L0008567    , L0008568    , L0008569    ,
L0008570    , L0008571    , L0008572    ,

             L0008573    , L0008574    , L0008575    , L0008576    , L0008577    ,
L0008578    , L0008579    , L0008580    ,
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17

                                   PAGE  21
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
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URBAN ID	URBAN POP	SOURCE IDs
		L0008581 , L0008582 , L0008583 , L0008584 , L0008585 , L0008586 , L0008587 , L0008588 ,
		L0008589 , L0008590 , L0008591 , L0008592 , L0008593 , L0008594 , L0008595 , L0008596 ,
		L0008597 , L0008598 , L0008599 , L0008600 , L0008601 , L0008602 , L0008603 , L0008604 ,
		L0008605 , L0008606 , L0008607 , L0008608 , L0008609 , L0008610 , L0008611 , L0008612 ,
		L0008613 , L0008614 , L0008615 , L0008616 , L0008617 , L0008618 , L0008619 , L0008620 ,
		L0008621 , L0008622 , L0008623 , L0008624 , L0008625 , L0008626 , L0008627 , L0008628 ,
		L0008629 , L0008630 , L0008631 , L0008632 , L0008633 , L0008634 , L0008635 , L0008636 ,
		L0008637 , L0008638 , L0008639 , L0008640 , L0008641 , L0008642 , L0008643 , L0008644 ,
		L0008645 , L0008646 , L0008647 , L0008648 , L0008649 , L0008650 , L0008651 , L0008652 ,
		L0008653 , L0008654 , L0008655 , L0008656 , L0008657 , L0008658 , L0008659 , L0008660 ,
		L0008661 , L0008662 , L0008663 , L0008664 , L0008665 , L0008666 , L0008667 , L0008668 ,
		L0008669 , L0008670 , L0008671 , L0008672 , L0008673 , L0008674 , L0008675 , L0008676 ,
		L0008677 , L0008678 , L0008679 , L0008680 , L0008681 , L0008682 , L0008683 , L0008684 ,
		L0008685 , L0008686 , L0008687 , L0008688 , L0008689 , L0008690 , L0008691 , L0008692 ,
		L0008693 , L0008694 , L0008695 , L0008696 , L0008697 , L0008698 , L0009525 , L0009526 ,

L0009527 , L0009528 , L0009529 , L0009530 , L0009531 ,
L0009532 , L0009533 , L0009534 ,

L0009535 , L0009536 , L0009537 , L0009538 , L0009539 ,
L0009540 , L0009541 , L0009542 ,

L0009543 , L0009544 , L0009545 , L0009546 , L0009547 ,
L0009548 , L0009549 , L0009550 ,

L0009551 , L0009552 , L0009553 , L0009554 , L0009555 ,
L0009556 , L0009557 , L0009558 ,

L0009559 , L0009560 , L0009561 , L0009562 , L0009563 ,
L0009564 , L0009565 , L0009566 ,

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0009567 , L0009568 , L0009569 , L0009570 , L0009571 ,
L0009572 , L0009573 , L0009574 ,

L0009575 , L0009576 , L0009577 , L0009578 , L0009579 ,

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(460204.1, 3779784.8, 531.4, 531.4, 0.0); (460254.1,

3779784.8,   530.7,   530.7,   0.0);
     (460304.1, 3779784.8,   530.5,   530.5,   0.0);   (460204.1,
3779834.8,   533.1,   533.1,   0.0);
     (460254.1, 3779834.8,   532.9,   532.9,   0.0);   (460304.1,
3779834.8,   532.8,   532.8,   0.0);
     (460204.1, 3779884.8,   534.4,   534.4,   0.0);   (460254.1,
3779884.8,   533.8,   533.8,   0.0);
     (460304.1, 3779884.8,   533.6,   533.6,   0.0);   (460204.1,
3779934.8,   536.3,   536.3,   0.0);
     (460254.1, 3779934.8,   535.9,   535.9,   0.0);   (460304.1,
3779934.8,   535.6,   535.6,   0.0);
     (460204.1, 3779984.8,   537.4,   537.4,   0.0);   (460254.1,
3779984.8,   536.8,   536.8,   0.0);
     (460304.1, 3779984.8,   536.4,   536.4,   0.0);   (460204.1,
3780034.8,   539.0,   539.0,   0.0);
     (460254.1, 3780034.8,   538.3,   538.3,   0.0);   (460304.1,
3780034.8,   537.9,   537.9,   0.0);
     (460204.1, 3780084.8,   540.4,   540.4,   0.0);   (460254.1,
3780084.8,   539.8,   539.8,   0.0);
     (460304.1, 3780084.8,   539.5,   539.5,   0.0);   (460204.1,
3780134.8,   541.7,   541.7,   0.0);
     (460254.1, 3780134.8,   540.8,   540.8,   0.0);   (460304.1,
3780134.8,   540.5,   540.5,   0.0);
     (460204.1, 3780184.8,   542.8,   542.8,   0.0);   (460254.1,
3780184.8,   542.1,   542.1,   0.0);
     (460304.1, 3780184.8,   542.5,   542.5,   0.0);   (460204.1,
3780234.8,   544.2,   544.2,   0.0);
     (460254.1, 3780234.8,   543.3,   543.3,   0.0);   (460304.1,
3780234.8,   543.2,   543.2,   0.0);
     (460204.1, 3780284.8,   546.0,   546.0,   0.0);   (460254.1,
3780284.8,   545.6,   545.6,   0.0);
     (460304.1, 3780284.8,   545.5,   545.5,   0.0);   (460204.1,
3780334.8,   547.3,   547.3,   0.0);
     (460254.1, 3780334.8,   546.9,   546.9,   0.0);   (460304.1,
3780334.8,   546.9,   546.9,   0.0);
     (460204.1, 3780384.8,   548.7,   548.7,   0.0);   (460254.1,
3780384.8,   548.0,   548.0,   0.0);
     (460304.1, 3780384.8,   547.9,   547.9,   0.0);   (460204.1,
3780434.8,   549.9,   549.9,   0.0);
     (460254.1, 3780434.8,   549.7,   549.7,   0.0);   (460304.1,
3780434.8,   549.6,   549.6,   0.0);
     (460204.1, 3780484.8,   551.2,   551.2,   0.0);   (460254.1,
3780484.8,   550.5,   550.5,   0.0);
     (460304.1, 3780484.8,   550.3,   550.3,   0.0);   (460349.5,
3779783.5,   530.2,   530.2,   0.0);
     (460399.5, 3779783.5,   530.0,   530.0,   0.0);   (460449.5,
3779783.5,   529.6,   529.6,   0.0);
     (460499.5, 3779783.5,   529.1,   529.1,   0.0);   (460349.5,

3779833.5,   532.2,   532.2,   0.0);
     (460399.5, 3779833.5,   531.6,   531.6,   0.0);   (460449.5,
3779833.5,   530.8,   530.8,   0.0);
     (460499.5, 3779833.5,   531.4,   531.4,   0.0);   (460349.5,
3779883.5,   533.2,   533.2,   0.0);
     (460399.5, 3779883.5,   533.3,   533.3,   0.0);   (460449.5,
3779883.5,   532.3,   532.3,   0.0);
     (460499.5, 3779883.5,   532.5,   532.5,   0.0);   (460349.5,
3779933.5,   534.9,   534.9,   0.0);
     (460399.5, 3779933.5,   534.6,   534.6,   0.0);   (460449.5,
3779933.5,   534.0,   534.0,   0.0);
     (460499.5, 3779933.5,   534.7,   534.7,   0.0);   (460349.5,
3779983.5,   535.8,   535.8,   0.0);
     (460399.5, 3779983.5,   535.8,   535.8,   0.0);   (460449.5,
3779983.5,   535.6,   535.6,   0.0);
     (460499.5, 3779983.5,   535.6,   535.6,   0.0);   (460349.5,
3780033.5,   537.3,   537.3,   0.0);
     (460399.5, 3780033.5,   536.7,   536.7,   0.0);   (460449.5,
3780033.5,   537.2,   537.2,   0.0);
     (460499.5, 3780033.5,   536.9,   536.9,   0.0);   (460349.5,
3780083.5,   539.1,   539.1,   0.0);
     (460399.5, 3780083.5,   538.7,   538.7,   0.0);   (460449.5,
3780083.5,   538.4,   538.4,   0.0);
     (460499.5, 3780083.5,   538.4,   538.4,   0.0);   (460349.5,
3780133.5,   540.2,   540.2,   0.0);
     (460399.5, 3780133.5,   539.8,   539.8,   0.0);   (460449.5,
3780133.5,   539.5,   539.5,   0.0);
     (460499.5, 3780133.5,   539.3,   539.3,   0.0);   (460349.5,
3780183.5,   542.3,   542.3,   0.0);
     (460399.5, 3780183.5,   541.8,   541.8,   0.0);   (460449.5,
3780183.5,   541.5,   541.5,   0.0);
     (460499.5, 3780183.5,   541.2,   541.2,   0.0);   (460349.5,
3780233.5,   542.8,   542.8,   0.0);
     (460399.5, 3780233.5,   542.8,   542.8,   0.0);   (460449.5,
3780233.5,   542.1,   542.1,   0.0);
     (460499.5, 3780233.5,   541.7,   541.7,   0.0);   (460349.5,
3780283.5,   545.0,   545.0,   0.0);
     (460399.5, 3780283.5,   544.7,   544.7,   0.0);   (460449.5,
3780283.5,   543.7,   543.7,   0.0);
     (460499.5, 3780283.5,   543.9,   543.9,   0.0);   (460349.5,
3780333.5,   546.4,   546.4,   0.0);
 *** AERMOD - VERSION 19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa ***   03/19/20
 *** AERMET - VERSION 16216 ***   ***
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                                  PAGE 24
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(460399.5, 3780333.5, 546.1, 546.1, 0.0); (460449.5, 3780333.5, 545.1, 545.1, 0.0);
(460499.5, 3780333.5, 545.2, 545.2, 0.0); (460349.5, 3780383.5, 547.5, 547.5, 0.0);
(460399.5, 3780383.5, 547.4, 547.4, 0.0); (460449.5, 3780383.5, 546.6, 546.6, 0.0);
(460499.5, 3780383.5, 546.7, 546.7, 0.0); (460349.5, 3780433.5, 549.1, 549.1, 0.0);
(460399.5, 3780433.5, 548.9, 548.9, 0.0); (460449.5, 3780433.5, 548.5, 548.5, 0.0);
(460499.5, 3780433.5, 548.6, 548.6, 0.0); (460349.5, 3780483.5, 550.0, 550.0, 0.0);
(460399.5, 3780483.5, 550.7, 550.7, 0.0); (460449.5, 3780483.5, 550.5, 550.5, 0.0);
(460499.5, 3780483.5, 549.7, 549.7, 0.0); (459271.0, 3777660.4, 474.4, 474.4, 0.0);
(459321.0, 3777660.4, 474.8, 474.8, 0.0); (459371.0, 3777660.4, 474.5, 474.5, 0.0);
(459271.0, 3777710.4, 475.3, 475.3, 0.0); (459321.0, 3777710.4, 475.2, 475.2, 0.0);
(459371.0, 3777710.4, 473.0, 473.0, 0.0); (459421.0, 3777710.4, 473.4, 473.4, 0.0);
(459471.0, 3777710.4, 476.3, 476.3, 0.0); (459521.0, 3777710.4, 477.2, 477.2, 0.0);
(459271.0, 3777760.4, 476.1, 476.1, 0.0); (459321.0, 3777760.4, 475.5, 475.5, 0.0);
(459371.0, 3777760.4, 473.4, 473.4, 0.0); (459421.0, 3777760.4, 473.3, 473.3, 0.0);
(459471.0, 3777760.4, 476.8, 476.8, 0.0); (459521.0, 3777760.4, 478.2, 478.2, 0.0);
(459571.0, 3777760.4, 477.8, 477.8, 0.0); (459621.0, 3777760.4, 478.2, 478.2, 0.0);
(459671.0, 3777760.4, 478.5, 478.5, 0.0); (459721.0, 3777760.4, 478.8, 478.8, 0.0);
(459771.0, 3777760.4, 478.4, 478.4, 0.0); (459271.0, 3777810.4, 475.2, 482.6, 0.0);
(459321.0, 3777810.4, 476.1, 476.1, 0.0); (459371.0, 3777810.4, 474.8, 474.8, 0.0);
(459421.0, 3777810.4, 472.2, 481.2, 0.0); (459471.0, 3777810.4, 478.7, 479.0, 0.0);
(459521.0, 3777810.4, 479.2, 479.2, 0.0); (459571.0, 3777810.4, 479.2, 479.2, 0.0);
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     (459271.0, 3777860.4,   478.8,   483.7,   0.0);   (459321.0,
3777860.4,   477.8,   483.6,   0.0);
     (459371.0, 3777860.4,   476.7,   476.7,   0.0);   (459421.0,
3777860.4,   474.8,   481.9,   0.0);
     (459471.0, 3777860.4,   480.7,   480.7,   0.0);   (459521.0,
3777860.4,   480.7,   480.7,   0.0);
     (459571.0, 3777860.4,   481.2,   481.2,   0.0);   (459621.0,
3777860.4,   480.7,   480.7,   0.0);
     (459671.0, 3777860.4,   481.1,   481.1,   0.0);   (459721.0,
3777860.4,   481.4,   481.4,   0.0);
     (459771.0, 3777860.4,   481.3,   481.3,   0.0);   (459271.0,
3777910.4,   483.7,   483.7,   0.0);
     (459321.0, 3777910.4,   482.4,   482.4,   0.0);   (459371.0,
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     (459421.0, 3777910.4,   478.3,   482.3,   0.0);   (459471.0,
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     (459521.0, 3777910.4,   482.0,   482.0,   0.0);   (459571.0,
3777910.4,   482.7,   482.7,   0.0);
     (459621.0, 3777910.4,   482.5,   482.5,   0.0);   (459671.0,
3777910.4,   482.6,   482.6,   0.0);
     (459721.0, 3777910.4,   482.2,   482.2,   0.0);   (459771.0,
3777910.4,   482.3,   482.3,   0.0);
     (459271.0, 3777960.4,   484.0,   484.0,   0.0);   (459321.0,
3777960.4,   483.6,   483.6,   0.0);
     (459371.0, 3777960.4,   479.6,   479.6,   0.0);   (459421.0,
3777960.4,   481.6,   481.6,   0.0);
     (459471.0, 3777960.4,   482.7,   482.7,   0.0);   (459521.0,
3777960.4,   483.6,   483.6,   0.0);
     (459571.0, 3777960.4,   484.3,   484.3,   0.0);   (459621.0,
3777960.4,   483.8,   483.8,   0.0);
     (459671.0, 3777960.4,   483.6,   483.6,   0.0);   (459721.0,
3777960.4,   483.5,   483.5,   0.0);
     (459771.0, 3777960.4,   483.5,   483.5,   0.0);   (459271.0,
3778010.4,   484.6,   484.6,   0.0);
     (459321.0, 3778010.4,   482.8,   482.8,   0.0);   (459371.0,
3778010.4,   482.7,   482.7,   0.0);
     (459421.0, 3778010.4,   484.6,   484.6,   0.0);   (459471.0,
3778010.4,   483.6,   483.6,   0.0);
     (459521.0, 3778010.4,   484.6,   484.6,   0.0);   (459571.0,
3778010.4,   485.4,   485.4,   0.0);
     (459621.0, 3778010.4,   485.1,   485.1,   0.0);   (459671.0,
3778010.4,   485.2,   485.2,   0.0);
     (459721.0, 3778010.4,   485.5,   485.5,   0.0);   (459771.0,
3778010.4,   485.3,   485.3,   0.0);

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(459271.0, 3778060.4, 485.9, 485.9, 0.0); (459321.0, 3778060.4, 483.9, 483.9, 0.0);
(459371.0, 3778060.4, 485.5, 485.5, 0.0); (459421.0, 3778060.4, 485.4, 485.4, 0.0);
(459471.0, 3778060.4, 485.7, 485.7, 0.0); (459521.0, 3778060.4, 486.0, 486.0, 0.0);
(459571.0, 3778060.4, 486.6, 486.6, 0.0); (459621.0, 3778060.4, 486.2, 486.2, 0.0);
(459671.0, 3778060.4, 486.4, 486.4, 0.0); (459721.0, 3778060.4, 486.7, 486.7, 0.0);
(459771.0, 3778060.4, 486.5, 486.5, 0.0); (459271.0, 3778110.4, 487.0, 487.0, 0.0);
(459321.0, 3778110.4, 487.5, 487.5, 0.0); (459371.0, 3778110.4, 486.2, 486.2, 0.0);
(459421.0, 3778110.4, 486.6, 486.6, 0.0); (459471.0, 3778110.4, 487.5, 487.5, 0.0);
(459521.0, 3778110.4, 487.5, 487.5, 0.0); (459571.0, 3778110.4, 487.7, 487.7, 0.0);
(459621.0, 3778110.4, 487.2, 487.2, 0.0); (459671.0, 3778110.4, 487.2, 487.2, 0.0);
(459721.0, 3778110.4, 487.3, 487.3, 0.0); (459771.0, 3778110.4, 487.4, 487.4, 0.0);
(459271.0, 3778160.4, 488.5, 488.5, 0.0); (459321.0, 3778160.4, 488.7, 488.7, 0.0);
(459371.0, 3778160.4, 484.0, 484.0, 0.0); (459421.0, 3778160.4, 487.8, 487.8, 0.0);
(459471.0, 3778160.4, 488.4, 488.4, 0.0); (459521.0, 3778160.4, 488.5, 488.5, 0.0);
(459571.0, 3778160.4, 488.9, 488.9, 0.0); (459621.0, 3778160.4, 488.2, 488.2, 0.0);
(459671.0, 3778160.4, 488.6, 488.6, 0.0); (459721.0, 3778160.4, 488.9, 488.9, 0.0);
(459771.0, 3778160.4, 488.8, 488.8, 0.0); (459271.0, 3778210.4, 489.9, 489.9, 0.0);
(459321.0, 3778210.4, 489.9, 489.9, 0.0); (459371.0, 3778210.4, 484.6, 491.0, 0.0);
(459421.0, 3778210.4, 488.9, 488.9, 0.0); (459471.0,

3778210.4,   489.8,   489.8,   0.0);
     (459521.0, 3778210.4,   489.6,   489.6,   0.0);   (459571.0,
3778210.4,   490.1,   490.1,   0.0);
     (459621.0, 3778210.4,   489.5,   489.5,   0.0);   (459671.0,
3778210.4,   489.7,   489.7,   0.0);
     (459721.0, 3778210.4,   489.6,   489.6,   0.0);   (459771.0,
3778210.4,   489.8,   489.8,   0.0);
     (459271.0, 3778260.4,   491.2,   491.2,   0.0);   (459321.0,
3778260.4,   491.2,   491.2,   0.0);
     (459371.0, 3778260.4,   487.3,   487.3,   0.0);   (459421.0,
3778260.4,   489.6,   489.6,   0.0);
     (459471.0, 3778260.4,   490.7,   490.7,   0.0);   (459521.0,
3778260.4,   490.7,   490.7,   0.0);
     (459571.0, 3778260.4,   490.9,   490.9,   0.0);   (459621.0,
3778260.4,   490.7,   490.7,   0.0);
     (459671.0, 3778260.4,   490.9,   490.9,   0.0);   (459721.0,
3778260.4,   490.8,   490.8,   0.0);
     (459771.0, 3778260.4,   490.9,   490.9,   0.0);   (459271.0,
3778310.4,   491.9,   491.9,   0.0);
     (459321.0, 3778310.4,   491.6,   491.6,   0.0);   (459371.0,
3778310.4,   490.8,   490.8,   0.0);
     (459421.0, 3778310.4,   490.7,   490.7,   0.0);   (459471.0,
3778310.4,   491.1,   491.1,   0.0);
     (459521.0, 3778310.4,   491.3,   491.3,   0.0);   (459571.0,
3778310.4,   491.4,   491.4,   0.0);
     (459621.0, 3778310.4,   491.9,   491.9,   0.0);   (459671.0,
3778310.4,   492.4,   492.4,   0.0);
     (459721.0, 3778310.4,   492.9,   492.9,   0.0);   (459771.0,
3778310.4,   492.4,   492.4,   0.0);
     (459271.0, 3778360.4,   492.4,   492.4,   0.0);   (459321.0,
3778360.4,   491.8,   491.8,   0.0);
     (459371.0, 3778360.4,   487.9,   496.0,   0.0);   (459421.0,
3778360.4,   490.2,   490.2,   0.0);
     (459471.0, 3778360.4,   491.2,   491.2,   0.0);   (459521.0,
3778360.4,   492.4,   492.4,   0.0);
     (459571.0, 3778360.4,   493.0,   493.0,   0.0);   (459621.0,
3778360.4,   493.1,   493.1,   0.0);
     (459671.0, 3778360.4,   493.4,   493.4,   0.0);   (459721.0,
3778360.4,   494.1,   494.1,   0.0);
     (459771.0, 3778360.4,   494.1,   494.1,   0.0);   (459271.0,
3778410.4,   494.3,   494.3,   0.0);
     (459321.0, 3778410.4,   494.8,   494.8,   0.0);   (459371.0,
3778410.4,   493.7,   496.0,   0.0);
     (459421.0, 3778410.4,   491.6,   496.8,   0.0);   (459471.0,
3778410.4,   490.7,   490.7,   0.0);
     (459521.0, 3778410.4,   491.5,   491.5,   0.0);   (459571.0,
3778410.4,   493.7,   493.7,   0.0);
     (459621.0, 3778410.4,   494.7,   494.7,   0.0);   (459671.0,

3778410.4,   495.1,   495.1,   0.0);
     (459721.0, 3778410.4,   495.4,   495.4,   0.0);   (459771.0,
3778410.4,   495.3,   495.3,   0.0);
     (459271.0, 3778460.4,   495.9,   495.9,   0.0);   (459321.0,
3778460.4,   495.8,   495.8,   0.0);

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                  (METERS)

     (459371.0, 3778460.4,   496.4,   496.4,   0.0);   (459421.0,
3778460.4,   496.8,   496.8,   0.0);
     (459471.0, 3778460.4,   494.5,   497.9,   0.0);   (459521.0,
3778460.4,   492.8,   497.9,   0.0);
     (459571.0, 3778460.4,   493.0,   493.0,   0.0);   (459621.0,
3778460.4,   496.4,   496.4,   0.0);
     (459671.0, 3778460.4,   496.3,   496.3,   0.0);   (459721.0,
3778460.4,   497.2,   497.2,   0.0);
     (459771.0, 3778460.4,   496.9,   496.9,   0.0);   (459271.0,
3778510.4,   497.7,   497.7,   0.0);
     (459321.0, 3778510.4,   497.8,   497.8,   0.0);   (459371.0,
3778510.4,   497.7,   497.7,   0.0);
     (459421.0, 3778510.4,   497.5,   497.5,   0.0);   (459471.0,
3778510.4,   498.0,   498.0,   0.0);
     (459521.0, 3778510.4,   498.3,   498.3,   0.0);   (459571.0,
3778510.4,   495.7,   495.7,   0.0);
     (459621.0, 3778510.4,   497.7,   497.7,   0.0);   (459671.0,
3778510.4,   497.9,   497.9,   0.0);
     (459721.0, 3778510.4,   497.9,   497.9,   0.0);   (459771.0,
3778510.4,   497.9,   497.9,   0.0);
     (459271.0, 3778560.4,   498.1,   498.1,   0.0);   (459321.0,
3778560.4,   498.1,   498.1,   0.0);
     (459371.0, 3778560.4,   498.0,   498.0,   0.0);   (459421.0,
3778560.4,   497.9,   497.9,   0.0);
     (459471.0, 3778560.4,   498.5,   498.5,   0.0);   (459521.0,
3778560.4,   498.5,   498.5,   0.0);
     (459571.0, 3778560.4,   499.3,   499.3,   0.0);   (459621.0,
3778560.4,   500.1,   500.1,   0.0);
     (459671.0, 3778560.4,   499.4,   499.4,   0.0);   (459721.0,
3778560.4,   499.0,   499.0,   0.0);
     (459771.0, 3778560.4,   499.2,   499.2,   0.0);   (459271.0,

3778610.4,   495.9,   502.5,   0.0);
     (459321.0, 3778610.4,   497.4,   497.4,   0.0);   (459371.0,
3778610.4,   498.4,   498.4,   0.0);
     (459421.0, 3778610.4,   497.6,   497.6,   0.0);   (459471.0,
3778610.4,   497.9,   497.9,   0.0);
     (459521.0, 3778610.4,   498.4,   498.4,   0.0);   (459571.0,
3778610.4,   500.4,   500.4,   0.0);
     (459621.0, 3778610.4,   500.5,   500.5,   0.0);   (459671.0,
3778610.4,   500.5,   500.5,   0.0);
     (459721.0, 3778610.4,   500.2,   500.2,   0.0);   (459771.0,
3778610.4,   500.6,   500.6,   0.0);
     (459271.0, 3778660.4,   500.9,   502.5,   0.0);   (459321.0,
3778660.4,   501.4,   501.4,   0.0);
     (459371.0, 3778660.4,   501.4,   501.4,   0.0);   (459421.0,
3778660.4,   501.4,   501.4,   0.0);
     (459471.0, 3778660.4,   501.8,   501.8,   0.0);   (459521.0,
3778660.4,   501.4,   501.4,   0.0);
     (459571.0, 3778660.4,   501.1,   501.1,   0.0);   (459621.0,
3778660.4,   501.8,   501.8,   0.0);
     (459671.0, 3778660.4,   501.5,   501.5,   0.0);   (459721.0,
3778660.4,   501.2,   501.2,   0.0);
     (459771.0, 3778660.4,   501.5,   501.5,   0.0);   (459271.0,
3778710.4,   503.2,   503.2,   0.0);
     (459321.0, 3778710.4,   503.7,   503.7,   0.0);   (459371.0,
3778710.4,   503.7,   503.7,   0.0);
     (459421.0, 3778710.4,   503.2,   503.2,   0.0);   (459471.0,
3778710.4,   503.3,   503.3,   0.0);
     (459521.0, 3778710.4,   502.9,   502.9,   0.0);   (459571.0,
3778710.4,   502.6,   502.6,   0.0);
     (459621.0, 3778710.4,   503.4,   503.4,   0.0);   (459671.0,
3778710.4,   502.4,   502.4,   0.0);
     (459721.0, 3778710.4,   503.1,   503.1,   0.0);   (459771.0,
3778710.4,   503.1,   503.1,   0.0);
     (459271.0, 3778760.4,   504.1,   504.1,   0.0);   (459321.0,
3778760.4,   504.3,   504.3,   0.0);
     (459371.0, 3778760.4,   504.2,   504.2,   0.0);   (459421.0,
3778760.4,   504.2,   504.2,   0.0);
     (459471.0, 3778760.4,   504.4,   504.4,   0.0);   (459521.0,
3778760.4,   504.5,   504.5,   0.0);
     (459571.0, 3778760.4,   504.6,   504.6,   0.0);   (459621.0,
3778760.4,   503.9,   503.9,   0.0);
     (459671.0, 3778760.4,   503.9,   503.9,   0.0);   (459721.0,
3778760.4,   504.3,   504.3,   0.0);
     (459771.0, 3778760.4,   504.6,   504.6,   0.0);   (459271.0,
3778810.4,   505.4,   505.4,   0.0);
     (459321.0, 3778810.4,   505.4,   505.4,   0.0);   (459371.0,
3778810.4,   505.6,   505.6,   0.0);
     (459421.0, 3778810.4,   505.6,   505.6,   0.0);   (459471.0,

3778810.4,   505.9,   505.9,   0.0);
     (459521.0, 3778810.4,   505.8,   505.8,   0.0);   (459571.0,
3778810.4,   505.4,   505.4,   0.0);
     (459621.0, 3778810.4,   505.4,   505.4,   0.0);   (459671.0,
3778810.4,   505.1,   505.1,   0.0);
     (459721.0, 3778810.4,   505.7,   505.7,   0.0);   (459771.0,
3778810.4,   505.8,   505.8,   0.0);
     (459271.0, 3778860.4,   506.1,   506.1,   0.0);   (459321.0,
3778860.4,   506.0,   506.0,   0.0);
     (459371.0, 3778860.4,   506.2,   506.2,   0.0);   (459421.0,
3778860.4,   506.3,   506.3,   0.0);
 *** AERMOD - VERSION 19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa ***   03/19/20
 *** AERMET - VERSION 16216 ***   ***
                       ***   16:11:17

                                  PAGE 27
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                      (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                (METERS)

     (459471.0, 3778860.4,   506.7,   506.7,   0.0);   (459521.0,
3778860.4,   506.5,   506.5,   0.0);
     (459571.0, 3778860.4,   506.0,   506.0,   0.0);   (459621.0,
3778860.4,   506.3,   506.3,   0.0);
     (459671.0, 3778860.4,   506.1,   506.1,   0.0);   (459721.0,
3778860.4,   506.6,   506.6,   0.0);
     (459771.0, 3778860.4,   507.0,   507.0,   0.0);   (459271.0,
3778910.4,   506.7,   506.7,   0.0);
     (459321.0, 3778910.4,   506.8,   506.8,   0.0);   (459371.0,
3778910.4,   507.0,   507.0,   0.0);
     (459421.0, 3778910.4,   507.2,   507.2,   0.0);   (459471.0,
3778910.4,   507.3,   507.3,   0.0);
     (459521.0, 3778910.4,   507.3,   507.3,   0.0);   (459571.0,
3778910.4,   507.2,   507.2,   0.0);
     (459621.0, 3778910.4,   507.5,   507.5,   0.0);   (459671.0,
3778910.4,   507.7,   507.7,   0.0);
     (459721.0, 3778910.4,   508.0,   508.0,   0.0);   (459771.0,
3778910.4,   508.2,   508.2,   0.0);
     (459271.0, 3778960.4,   509.2,   509.2,   0.0);   (459321.0,
3778960.4,   509.0,   509.0,   0.0);
     (459371.0, 3778960.4,   509.0,   509.0,   0.0);   (459421.0,
3778960.4,   509.3,   509.3,   0.0);
     (459471.0, 3778960.4,   509.4,   509.4,   0.0);   (459521.0,
3778960.4,   509.2,   509.2,   0.0);
     (459571.0, 3778960.4,   509.0,   509.0,   0.0);   (459621.0,

3778960.4,   509.1,   509.1,   0.0);
     (459671.0, 3778960.4,   509.3,   509.3,   0.0);   (459721.0,
3778960.4,   509.6,   509.6,   0.0);
     (459771.0, 3778960.4,   509.6,   509.6,   0.0);   (459271.0,
3779010.4,   510.5,   510.5,   0.0);
     (459321.0, 3779010.4,   510.5,   510.5,   0.0);   (459371.0,
3779010.4,   510.4,   510.4,   0.0);
     (459421.0, 3779010.4,   510.7,   510.7,   0.0);   (459471.0,
3779010.4,   510.9,   510.9,   0.0);
     (459521.0, 3779010.4,   510.8,   510.8,   0.0);   (459571.0,
3779010.4,   510.4,   510.4,   0.0);
     (459621.0, 3779010.4,   510.5,   510.5,   0.0);   (459671.0,
3779010.4,   510.7,   510.7,   0.0);
     (459721.0, 3779010.4,   511.0,   511.0,   0.0);   (459771.0,
3779010.4,   511.0,   511.0,   0.0);
     (459271.0, 3779060.4,   511.8,   511.8,   0.0);   (459321.0,
3779060.4,   511.9,   511.9,   0.0);
     (459371.0, 3779060.4,   511.8,   511.8,   0.0);   (459421.0,
3779060.4,   512.0,   512.0,   0.0);
     (459471.0, 3779060.4,   512.3,   512.3,   0.0);   (459521.0,
3779060.4,   512.1,   512.1,   0.0);
     (459571.0, 3779060.4,   511.7,   511.7,   0.0);   (459621.0,
3779060.4,   511.9,   511.9,   0.0);
     (459671.0, 3779060.4,   512.0,   512.0,   0.0);   (459721.0,
3779060.4,   512.3,   512.3,   0.0);
     (459771.0, 3779060.4,   512.5,   512.5,   0.0);   (459271.0,
3779110.4,   513.0,   513.0,   0.0);
     (459321.0, 3779110.4,   513.2,   513.2,   0.0);   (459371.0,
3779110.4,   513.2,   513.2,   0.0);
     (459421.0, 3779110.4,   513.3,   513.3,   0.0);   (459471.0,
3779110.4,   513.5,   513.5,   0.0);
     (459521.0, 3779110.4,   513.4,   513.4,   0.0);   (459571.0,
3779110.4,   513.2,   513.2,   0.0);
     (459621.0, 3779110.4,   513.3,   513.3,   0.0);   (459671.0,
3779110.4,   513.2,   513.2,   0.0);
     (459721.0, 3779110.4,   513.5,   513.5,   0.0);   (459771.0,
3779110.4,   513.7,   513.7,   0.0);
     (459271.0, 3779160.4,   514.1,   514.1,   0.0);   (459321.0,
3779160.4,   514.6,   514.6,   0.0);
     (459371.0, 3779160.4,   514.8,   514.8,   0.0);   (459421.0,
3779160.4,   514.6,   514.6,   0.0);
     (459471.0, 3779160.4,   514.7,   514.7,   0.0);   (459521.0,
3779160.4,   514.8,   514.8,   0.0);
     (459571.0, 3779160.4,   514.7,   514.7,   0.0);   (459621.0,
3779160.4,   514.5,   514.5,   0.0);
     (459671.0, 3779160.4,   514.5,   514.5,   0.0);   (459721.0,
3779160.4,   514.9,   514.9,   0.0);
     (459771.0, 3779160.4,   514.8,   514.8,   0.0);   (459271.0,

3779210.4,   515.5,   515.5,   0.0);
     (459321.0, 3779210.4,   515.8,   515.8,   0.0);   (459371.0,
3779210.4,   516.3,   516.3,   0.0);
     (459421.0, 3779210.4,   516.0,   516.0,   0.0);   (459471.0,
3779210.4,   516.0,   516.0,   0.0);
     (459521.0, 3779210.4,   516.2,   516.2,   0.0);   (459571.0,
3779210.4,   516.1,   516.1,   0.0);
     (459621.0, 3779210.4,   515.7,   515.7,   0.0);   (459671.0,
3779210.4,   515.9,   515.9,   0.0);
     (459721.0, 3779210.4,   516.3,   516.3,   0.0);   (459771.0,
3779210.4,   516.1,   516.1,   0.0);
     (459271.0, 3779260.4,   516.9,   516.9,   0.0);   (459321.0,
3779260.4,   517.2,   517.2,   0.0);
     (459371.0, 3779260.4,   517.6,   517.6,   0.0);   (459421.0,
3779260.4,   517.3,   517.3,   0.0);
     (459471.0, 3779260.4,   517.3,   517.3,   0.0);   (459521.0,
3779260.4,   517.7,   517.7,   0.0);

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                *** DISCRETE CARTESIAN RECEPTORS ***
                                              (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                          (METERS)

     (459571.0, 3779260.4,   517.3,   517.3,   0.0);   (459621.0,
3779260.4,   517.1,   517.1,   0.0);
     (459671.0, 3779260.4,   517.5,   517.5,   0.0);   (459721.0,
3779260.4,   517.5,   517.5,   0.0);
     (459771.0, 3779260.4,   517.5,   517.5,   0.0);   (459271.0,
3779310.4,   518.6,   518.6,   0.0);
     (459321.0, 3779310.4,   518.6,   518.6,   0.0);   (459371.0,
3779310.4,   518.9,   518.9,   0.0);
     (459421.0, 3779310.4,   518.6,   518.6,   0.0);   (459471.0,
3779310.4,   518.6,   518.6,   0.0);
     (459521.0, 3779310.4,   519.0,   519.0,   0.0);   (459571.0,
3779310.4,   518.5,   518.5,   0.0);
     (459621.0, 3779310.4,   518.5,   518.5,   0.0);   (459671.0,
3779310.4,   519.1,   519.1,   0.0);
     (459721.0, 3779310.4,   518.9,   518.9,   0.0);   (459771.0,
3779310.4,   518.9,   518.9,   0.0);
     (459271.0, 3779360.4,   520.0,   520.0,   0.0);   (459321.0,
3779360.4,   520.1,   520.1,   0.0);
     (459371.0, 3779360.4,   520.2,   520.2,   0.0);   (459421.0,

3779360.4,   520.0,   520.0,   0.0);
     (459471.0, 3779360.4,   520.0,   520.0,   0.0);   (459521.0,
3779360.4,   520.1,   520.1,   0.0);
     (459571.0, 3779360.4,   519.8,   519.8,   0.0);   (459621.0,
3779360.4,   519.9,   519.9,   0.0);
     (459671.0, 3779360.4,   520.6,   520.6,   0.0);   (459721.0,
3779360.4,   520.5,   520.5,   0.0);
     (459771.0, 3779360.4,   520.2,   520.2,   0.0);   (459271.0,
3779410.4,   521.4,   521.4,   0.0);
     (459321.0, 3779410.4,   521.5,   521.5,   0.0);   (459371.0,
3779410.4,   521.8,   521.8,   0.0);
     (459421.0, 3779410.4,   521.3,   521.3,   0.0);   (459471.0,
3779410.4,   521.6,   521.6,   0.0);
     (459521.0, 3779410.4,   521.5,   521.5,   0.0);   (459571.0,
3779410.4,   521.5,   521.5,   0.0);
     (459621.0, 3779410.4,   521.4,   521.4,   0.0);   (459671.0,
3779410.4,   522.0,   522.0,   0.0);
     (459721.0, 3779410.4,   522.0,   522.0,   0.0);   (459771.0,
3779410.4,   521.6,   521.6,   0.0);
     (459271.0, 3779460.4,   522.9,   522.9,   0.0);   (459321.0,
3779460.4,   523.0,   523.0,   0.0);
     (459371.0, 3779460.4,   523.2,   523.2,   0.0);   (459421.0,
3779460.4,   522.7,   522.7,   0.0);
     (459471.0, 3779460.4,   523.1,   523.1,   0.0);   (459521.0,
3779460.4,   522.8,   522.8,   0.0);
     (459571.0, 3779460.4,   523.1,   523.1,   0.0);   (459621.0,
3779460.4,   522.8,   522.8,   0.0);
     (459671.0, 3779460.4,   523.5,   523.5,   0.0);   (459721.0,
3779460.4,   523.5,   523.5,   0.0);
     (459771.0, 3779460.4,   523.1,   523.1,   0.0);   (459271.0,
3779510.4,   524.2,   524.2,   0.0);
     (459321.0, 3779510.4,   524.3,   524.3,   0.0);   (459371.0,
3779510.4,   524.4,   524.4,   0.0);
     (459421.0, 3779510.4,   524.2,   524.2,   0.0);   (459471.0,
3779510.4,   524.4,   524.4,   0.0);
     (459521.0, 3779510.4,   524.2,   524.2,   0.0);   (459571.0,
3779510.4,   524.5,   524.5,   0.0);
     (459621.0, 3779510.4,   524.4,   524.4,   0.0);   (459671.0,
3779510.4,   524.7,   524.7,   0.0);
     (459721.0, 3779510.4,   524.8,   524.8,   0.0);   (459771.0,
3779510.4,   524.6,   524.6,   0.0);
     (459271.0, 3779560.4,   525.7,   525.7,   0.0);   (459321.0,
3779560.4,   525.7,   525.7,   0.0);
     (459371.0, 3779560.4,   525.8,   525.8,   0.0);   (459421.0,
3779560.4,   525.6,   525.6,   0.0);
     (459471.0, 3779560.4,   525.8,   525.8,   0.0);   (459521.0,
3779560.4,   525.5,   525.5,   0.0);
     (459571.0, 3779560.4,   525.9,   525.9,   0.0);   (459621.0,

3779560.4,   525.9,   525.9,   0.0);
     (459671.0, 3779560.4,   526.2,   526.2,   0.0);   (459721.0,
3779560.4,   526.2,   526.2,   0.0);
     (459771.0, 3779560.4,   526.1,   526.1,   0.0);   (459271.0,
3779610.4,   527.0,   527.0,   0.0);
     (459321.0, 3779610.4,   527.1,   527.1,   0.0);   (459371.0,
3779610.4,   527.3,   527.3,   0.0);
     (459421.0, 3779610.4,   527.2,   527.2,   0.0);   (459471.0,
3779610.4,   527.1,   527.1,   0.0);
     (459521.0, 3779610.4,   527.1,   527.1,   0.0);   (459571.0,
3779610.4,   527.3,   527.3,   0.0);
     (459621.0, 3779610.4,   527.4,   527.4,   0.0);   (459671.0,
3779610.4,   527.6,   527.6,   0.0);
     (459721.0, 3779610.4,   527.6,   527.6,   0.0);   (459771.0,
3779610.4,   527.5,   527.5,   0.0);
     (459271.0, 3779660.4,   528.3,   528.3,   0.0);   (459321.0,
3779660.4,   528.5,   528.5,   0.0);
     (459371.0, 3779660.4,   528.7,   528.7,   0.0);   (459421.0,
3779660.4,   528.6,   528.6,   0.0);
     (459471.0, 3779660.4,   528.6,   528.6,   0.0);   (459521.0,
3779660.4,   528.7,   528.7,   0.0);
     (459571.0, 3779660.4,   528.7,   528.7,   0.0);   (459621.0,
3779660.4,   528.9,   528.9,   0.0);

                                          *** DISCRETE CARTESIAN RECEPTORS ***
                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                                  (METERS)

     (459671.0, 3779660.4,   529.1,   529.1,   0.0);   (459721.0,
3779660.4,   529.0,   529.0,   0.0);
     (459771.0, 3779660.4,   529.0,   529.0,   0.0);   (459271.0,
3779710.4,   529.9,   529.9,   0.0);
     (459321.0, 3779710.4,   529.9,   529.9,   0.0);   (459371.0,
3779710.4,   530.1,   530.1,   0.0);
     (459421.0, 3779710.4,   530.0,   530.0,   0.0);   (459471.0,
3779710.4,   530.1,   530.1,   0.0);
     (459521.0, 3779710.4,   530.2,   530.2,   0.0);   (459571.0,
3779710.4,   530.2,   530.2,   0.0);
     (459621.0, 3779710.4,   530.4,   530.4,   0.0);   (459671.0,
3779710.4,   530.6,   530.6,   0.0);
     (459721.0, 3779710.4,   530.5,   530.5,   0.0);   (459771.0,

3779710.4,   530.6,   530.6,   0.0);

                                                *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                                (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

                NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                                          (METERS/SEC)

                                                      1.54,   3.09,   5.14,   8.23,
10.80,

Fontana_Sierra Casa Grande.ADO
*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: FONT_V9_ADJU\FONT_v9.SFC
Met Version: 16216
Profile file: FONT_V9_ADJU\FONT_v9.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 3102 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN

Year: 2011 Year: 2011

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
11	01	01	1	01	-18.5	0.194	-9.000	-9.000	-999.	204.	41.2	0.25	2.82	1.00	1.80	69.	9.1	276.4	5.5
11	01	01	1	02	-23.8	0.239	-9.000	-9.000	-999.	281.	63.0	0.25	2.82	1.00	2.20	52.	9.1	275.4	5.5
11	01	01	1	03	-18.5	0.194	-9.000	-9.000	-999.	205.	41.2	0.25	2.82	1.00	1.80	32.	9.1	275.4	5.5
11	01	01	1	04	-1.4	0.067	-9.000	-9.000	-999.	57.	18.3	0.25	2.82	1.00	0.40	27.	9.1	274.2	5.5
11	01	01	1	05	-18.6	0.194	-9.000	-9.000	-999.	204.	41.2	0.25	2.82	1.00	1.80	51.	9.1	274.2	5.5
11	01	01	1	06	-29.7	0.296	-9.000	-9.000	-999.	387.	96.6	0.25	2.82	1.00	2.70	53.	9.1	274.2	5.5
11	01	01	1	07	-24.0	0.239	-9.000	-9.000	-999.	282.	63.0	0.25	2.82	1.00	2.20	70.	9.1	274.2	5.5
11	01	01	1	08	-8.4	0.138	-9.000	-9.000	-999.	127.	27.3	0.25	2.82	0.54	1.30	72.	9.1	275.4	5.5
11	01	01	1	09	44.3	0.280	0.571	0.005	147.	356.	-43.5	0.25	2.82	0.32	2.20	67.	9.1	277.5	5.5
11	01	01	1	10	122.7	0.264	0.952	0.005	247.	326.	-13.2	0.25	2.82	0.25	1.80	83.	9.1	279.9	5.5
11	01	01	1	11	179.8	0.316	1.733	0.005	1017.	426.	-15.4	0.25	2.82	0.22	2.20	58.	9.1	282.0	5.5
11	01	01	1	12	206.0	0.320	1.940	0.008	1244.	435.	-14.0	0.25	2.82	0.21	2.20	115.	9.1	283.1	5.5
11	01	01	1	13	132.6	0.214	1.733	0.009	1377.	243.	-6.5	0.25	2.82	0.21	1.30	147.	9.1	284.2	5.5
11	01	01	1	14	147.0	0.216	1.818	0.009	1431.	242.	-6.0	0.25	2.82						

```
0.23    1.30  219.    9.1  284.9    5.5
 11 01 01   1 15  104.0  0.208  1.633  0.009 1468.  228.     -7.6  0.25   2.82
0.26    1.30  126.    9.1  285.4    5.5
 11 01 01   1 16   26.4  0.140  1.037  0.009 1477.  127.     -9.1  0.25   2.82
0.35    0.90  151.    9.1  284.9    5.5
 11 01 01   1 17   -9.0  0.137 -9.000 -9.000 -999.  121.     24.9  0.25   2.82
0.63    1.30   69.    9.1  283.1    5.5
 11 01 01   1 18  -33.4  0.342 -9.000 -9.000 -999.  481.    129.0  0.25   2.82
1.00    3.10   81.    9.1  281.4    5.5
 11 01 01   1 19  -33.6  0.342 -9.000 -9.000 -999.  481.    128.9  0.25   2.82
1.00    3.10   51.    9.1  279.9    5.5
 11 01 01   1 20  -23.6  0.239 -9.000 -9.000 -999.  287.     63.1  0.25   2.82
1.00    2.20   77.    9.1  278.8    5.5
 11 01 01   1 21  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   53.    9.1  277.5    5.5
 11 01 01   1 22  -23.7  0.239 -9.000 -9.000 -999.  281.     63.0  0.25   2.82
1.00    2.20   58.    9.1  277.5    5.5
 11 01 01   1 23  -18.5  0.194 -9.000 -9.000 -999.  205.     41.2  0.25   2.82
1.00    1.80   64.    9.1  277.5    5.5
 11 01 01   1 24   -4.5  0.094 -9.000 -9.000 -999.   74.     16.3  0.25   2.82
1.00    0.90   52.    9.1  277.0    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 11 01 01 01    5.5 0 -999.  -99.00   276.5   99.0  -99.00  -99.00
 11 01 01 01    9.1 1   69.    1.80  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17

                                  PAGE  32
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0008261    , L0008262
, L0008263    , L0008264    , L0008265    ,
                   L0008266    , L0008267    , L0008268    , L0008269    , L0008270
, L0008271    , L0008272    , L0008273    ,
                   L0008274    , L0008275    , L0008276    , L0008277    , L0008278
, L0008279    , L0008280    , L0008281    ,
                   L0008282    , L0008283    , L0008284    , L0008285    , L0008286
, L0008287    , L0008288    ,  . . .      ,
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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
460204.12	3779784.84	0.04332	460254.12	3779784.84	0.03124
460304.12	3779784.84	0.02391	460204.12	3779834.84	0.05121
460254.12	3779834.84	0.03594	460304.12	3779834.84	0.02692
460204.12	3779884.84	0.05570	460254.12	3779884.84	0.03899
460304.12	3779884.84	0.02908	460204.12	3779934.84	0.05578
460254.12	3779934.84	0.03979	460304.12	3779934.84	0.02998
460204.12	3779984.84	0.05194	460254.12	3779984.84	0.03800
460304.12	3779984.84	0.02928	460204.12	3780034.84	0.04500
460254.12	3780034.84	0.03521	460304.12	3780034.84	0.02825
460204.12	3780084.84	0.03621	460254.12	3780084.84	0.03056
460304.12	3780084.84	0.02607	460204.12	3780134.84	0.02860
460254.12	3780134.84	0.02551	460304.12	3780134.84	0.02265
460204.12	3780184.84	0.02236	460254.12	3780184.84	0.02096
460304.12	3780184.84	0.02025	460204.12	3780234.84	0.01702
460254.12	3780234.84	0.01707	460304.12	3780234.84	0.01676
460204.12	3780284.84	0.01294	460254.12	3780284.84	0.01334
460304.12	3780284.84	0.01356	460204.12	3780334.84	0.01004
460254.12	3780334.84	0.01049	460304.12	3780334.84	0.01085
460204.12	3780384.84	0.00793	460254.12	3780384.84	0.00837

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         460304.12    3780384.84        0.00873                        460204.12
3780434.84        0.00640
         460254.12    3780434.84        0.00670                        460304.12
3780434.84        0.00702
         460204.12    3780484.84        0.00526                        460254.12
3780484.84        0.00554
         460304.12    3780484.84        0.00580                        460349.55
3779783.46        0.01933
         460399.55    3779783.46        0.01579                        460449.55
3779783.46        0.01318
         460499.55    3779783.46        0.01120                        460349.55
3779833.46        0.02145
         460399.55    3779833.46        0.01728                        460449.55
3779833.46        0.01428
         460499.55    3779833.46        0.01206                        460349.55
3779883.46        0.02308
         460399.55    3779883.46        0.01853                        460449.55
3779883.46        0.01523
         460499.55    3779883.46        0.01279                        460349.55
3779933.46        0.02396
         460399.55    3779933.46        0.01927                        460449.55
3779933.46        0.01587
         460499.55    3779933.46        0.01333                        460349.55
3779983.46        0.02380
         460399.55    3779983.46        0.01936                        460449.55
3779983.46        0.01607
         460499.55    3779983.46        0.01357                        460349.55
3780033.46        0.02323
         460399.55    3780033.46        0.01883                        460449.55
3780033.46        0.01611
         460499.55    3780033.46        0.01353                        460349.55
3780083.46        0.02239
         460399.55    3780083.46        0.01907                        460449.55
3780083.46        0.01620
         460499.55    3780083.46        0.01409                        460349.55
3780133.46        0.02032
         460399.55    3780133.46        0.01779                        460449.55
3780133.46        0.01568
         460499.55    3780133.46        0.01377                        460349.55
3780183.46        0.01878
         460399.55    3780183.46        0.01720                        460449.55
3780183.46        0.01539
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***       16:11:17
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
460499.55	3780183.46	0.01386	460349.55	3780233.46	0.01620
460399.55	3780233.46	0.01544	460449.55	3780233.46	0.01393
460499.55	3780233.46	0.01281	460349.55	3780283.46	0.01365
460399.55	3780283.46	0.01342	460449.55	3780283.46	0.01284
460499.55	3780283.46	0.01233	460349.55	3780333.46	0.01117
460399.55	3780333.46	0.01127	460449.55	3780333.46	0.01113
460499.55	3780333.46	0.01093	460349.55	3780383.46	0.00911
460399.55	3780383.46	0.00937	460449.55	3780383.46	0.00949
460499.55	3780383.46	0.00952	460349.55	3780433.46	0.00740
460399.55	3780433.46	0.00773	460449.55	3780433.46	0.00799
460499.55	3780433.46	0.00817	460349.55	3780483.46	0.00611
460399.55	3780483.46	0.00635	460449.55	3780483.46	0.00665
460499.55	3780483.46	0.00692	459271.04		

```
3777660.44        0.00088
         459321.04    3777660.44        0.00089                    459371.04
3777660.44        0.00090
         459271.04    3777710.44        0.00091                    459321.04
3777710.44        0.00092
         459371.04    3777710.44        0.00092                    459421.04
3777710.44        0.00093
         459471.04    3777710.44        0.00095                    459521.04
3777710.44        0.00096
         459271.04    3777760.44        0.00095                    459321.04
3777760.44        0.00095
         459371.04    3777760.44        0.00096                    459421.04
3777760.44        0.00097
         459471.04    3777760.44        0.00098                    459521.04
3777760.44        0.00099
         459571.04    3777760.44        0.00100                    459621.04
3777760.44        0.00102
         459671.04    3777760.44        0.00105                    459721.04
3777760.44        0.00110
         459771.04    3777760.44        0.00132                    459271.04
3777810.44        0.00098
         459321.04    3777810.44        0.00099                    459371.04
3777810.44        0.00100
         459421.04    3777810.44        0.00100                    459471.04
3777810.44        0.00102
         459521.04    3777810.44        0.00103                    459571.04
3777810.44        0.00104
         459621.04    3777810.44        0.00106                    459671.04
3777810.44        0.00109
         459721.04    3777810.44        0.00114                    459771.04
3777810.44        0.00136
         459271.04    3777860.44        0.00102                    459321.04
3777860.44        0.00103
         459371.04    3777860.44        0.00104                    459421.04
3777860.44        0.00104
         459471.04    3777860.44        0.00107                    459521.04
3777860.44        0.00108
         459571.04    3777860.44        0.00109                    459621.04
3777860.44        0.00110
         459671.04    3777860.44        0.00113                    459721.04
3777860.44        0.00119
         459771.04    3777860.44        0.00140                    459271.04
3777910.44        0.00107
         459321.04    3777910.44        0.00108                    459371.04
3777910.44        0.00108
         459421.04    3777910.44        0.00109                    459471.04
3777910.44        0.00111
         459521.04    3777910.44        0.00112                    459571.04
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3777910.44 0.00114
459621.04 3777910.44 0.00115 459671.04
3777910.44 0.00118
459721.04 3777910.44 0.00123 459771.04
3777910.44 0.00145
459271.04 3777960.44 0.00111 459321.04
3777960.44 0.00112
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 03/19/20
*** AERMET - VERSION 16216 *** ***
*** 16:11:17

PAGE 34
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
- -
459371.04 3777960.44 0.00113 459421.04
3777960.44 0.00114
459471.04 3777960.44 0.00116 459521.04
3777960.44 0.00117
459571.04 3777960.44 0.00118 459621.04
3777960.44 0.00120
459671.04 3777960.44 0.00123 459721.04
3777960.44 0.00128
459771.04 3777960.44 0.00149 459271.04
3778010.44 0.00116
459321.04 3778010.44 0.00117 459371.04
3778010.44 0.00118

459421.04 3778010.44 0.00120 459471.04
3778010.44 0.00121
459521.04 3778010.44 0.00122 459571.04
3778010.44 0.00124
459621.04 3778010.44 0.00125 459671.04
3778010.44 0.00128
459721.04 3778010.44 0.00133 459771.04
3778010.44 0.00155
459271.04 3778060.44 0.00121 459321.04
3778060.44 0.00122
459371.04 3778060.44 0.00123 459421.04
3778060.44 0.00125
459471.04 3778060.44 0.00126 459521.04
3778060.44 0.00128
459571.04 3778060.44 0.00129 459621.04
3778060.44 0.00131
459671.04 3778060.44 0.00134 459721.04
3778060.44 0.00139
459771.04 3778060.44 0.00160 459271.04
3778110.44 0.00126
459321.04 3778110.44 0.00128 459371.04
3778110.44 0.00129
459421.04 3778110.44 0.00130 459471.04
3778110.44 0.00132
459521.04 3778110.44 0.00133 459571.04
3778110.44 0.00135
459621.04 3778110.44 0.00137 459671.04
3778110.44 0.00139
459721.04 3778110.44 0.00145 459771.04
3778110.44 0.00166
459271.04 3778160.44 0.00131 459321.04
3778160.44 0.00133
459371.04 3778160.44 0.00133 459421.04
3778160.44 0.00136
459471.04 3778160.44 0.00138 459521.04
3778160.44 0.00140
459571.04 3778160.44 0.00141 459621.04
3778160.44 0.00143
459671.04 3778160.44 0.00146 459721.04
3778160.44 0.00152
459771.04 3778160.44 0.00172 459271.04
3778210.44 0.00137
459321.04 3778210.44 0.00139 459371.04
3778210.44 0.00139
459421.04 3778210.44 0.00143 459471.04
3778210.44 0.00145
459521.04 3778210.44 0.00146 459571.04
3778210.44 0.00148

```
         459621.04    3778210.44        0.00150                        459671.04
3778210.44        0.00153
         459721.04    3778210.44        0.00158                        459771.04
3778210.44        0.00179
         459271.04    3778260.44        0.00144                        459321.04
3778260.44        0.00146
         459371.04    3778260.44        0.00147                        459421.04
3778260.44        0.00149
         459471.04    3778260.44        0.00152                        459521.04
3778260.44        0.00154
         459571.04    3778260.44        0.00155                        459621.04
3778260.44        0.00158
         459671.04    3778260.44        0.00161                        459721.04
3778260.44        0.00166
         459771.04    3778260.44        0.00186                        459271.04
3778310.44        0.00150
         459321.04    3778310.44        0.00153                        459371.04
3778310.44        0.00155
         459421.04    3778310.44        0.00157                        459471.04
3778310.44        0.00159
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17

                                   PAGE  35
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     L0008261    , L0008262
, L0008263    , L0008264    , L0008265    ,
                   L0008266    , L0008267    , L0008268    , L0008269    , L0008270
, L0008271    , L0008272    , L0008273    ,
                   L0008274    , L0008275    , L0008276    , L0008277    , L0008278
, L0008279    , L0008280    , L0008281    ,
                   L0008282    , L0008283    , L0008284    , L0008285    , L0008286
, L0008287    , L0008288    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                   ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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- -
459521.04 3778310.44 0.00161 459571.04
3778310.44 0.00163
459621.04 3778310.44 0.00166 459671.04
3778310.44 0.00169
459721.04 3778310.44 0.00175 459771.04
3778310.44 0.00194
459271.04 3778360.44 0.00157 459321.04
3778360.44 0.00160
459371.04 3778360.44 0.00161 459421.04
3778360.44 0.00164
459471.04 3778360.44 0.00167 459521.04
3778360.44 0.00170
459571.04 3778360.44 0.00172 459621.04
3778360.44 0.00174
459671.04 3778360.44 0.00178 459721.04
3778360.44 0.00184
459771.04 3778360.44 0.00203 459271.04
3778410.44 0.00165
459321.04 3778410.44 0.00168 459371.04
3778410.44 0.00171
459421.04 3778410.44 0.00173 459471.04
3778410.44 0.00175
459521.04 3778410.44 0.00178 459571.04
3778410.44 0.00181
459621.04 3778410.44 0.00184 459671.04
3778410.44 0.00188
459721.04 3778410.44 0.00193 459771.04
3778410.44 0.00213
459271.04 3778460.44 0.00174 459321.04
3778460.44 0.00177
459371.04 3778460.44 0.00181 459421.04
3778460.44 0.00184
459471.04 3778460.44 0.00186 459521.04
3778460.44 0.00188
459571.04 3778460.44 0.00190 459621.04
3778460.44 0.00195
459671.04 3778460.44 0.00198 459721.04
3778460.44 0.00204
459771.04 3778460.44 0.00224 459271.04
3778510.44 0.00183
459321.04 3778510.44 0.00187 459371.04
3778510.44 0.00190
459421.04 3778510.44 0.00194 459471.04
3778510.44 0.00197
459521.04 3778510.44 0.00201 459571.04
3778510.44 0.00202
459621.04 3778510.44 0.00206 459671.04

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3778510.44        0.00210
         459721.04    3778510.44        0.00216                        459771.04
3778510.44        0.00236
         459271.04    3778560.44        0.00192                        459321.04
3778560.44        0.00196
         459371.04    3778560.44        0.00201                        459421.04
3778560.44        0.00205
         459471.04    3778560.44        0.00209                        459521.04
3778560.44        0.00212
         459571.04    3778560.44        0.00216                        459621.04
3778560.44        0.00220
         459671.04    3778560.44        0.00223                        459721.04
3778560.44        0.00229
         459771.04    3778560.44        0.00249                        459271.04
3778610.44        0.00200
         459321.04    3778610.44        0.00206                        459371.04
3778610.44        0.00212
         459421.04    3778610.44        0.00216                        459471.04
3778610.44        0.00220
         459521.04    3778610.44        0.00224                        459571.04
3778610.44        0.00229
         459621.04    3778610.44        0.00233                        459671.04
3778610.44        0.00237
         459721.04    3778610.44        0.00243                        459771.04
3778610.44        0.00263
         459271.04    3778660.44        0.00213                        459321.04
3778660.44        0.00219
         459371.04    3778660.44        0.00225                        459421.04
3778660.44        0.00230
         459471.04    3778660.44        0.00236                        459521.04
3778660.44        0.00240
         459571.04    3778660.44        0.00244                        459621.04
3778660.44        0.00249
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17

                                   PAGE  36
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     L0008261    , L0008262
, L0008263    , L0008264    , L0008265    ,
                  L0008266    , L0008267    , L0008268    , L0008269    , L0008270
, L0008271    , L0008272    , L0008273    ,
                  L0008274    , L0008275    , L0008276    , L0008277    , L0008278
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, L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286
, L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
459671.04	3778660.44	0.00253	459721.04	3778660.44	0.00259
459771.04	3778660.44	0.00279	459271.04	3778710.44	0.00226
459321.04	3778710.44	0.00233	459371.04	3778710.44	0.00239
459421.04	3778710.44	0.00245	459471.04	3778710.44	0.00251
459521.04	3778710.44	0.00256	459571.04	3778710.44	0.00261
459621.04	3778710.44	0.00266	459671.04	3778710.44	0.00270
459721.04	3778710.44	0.00278	459771.04	3778710.44	0.00297
459271.04	3778760.44	0.00238	459321.04	3778760.44	0.00246
459371.04	3778760.44	0.00254	459421.04	3778760.44	0.00261
459471.04	3778760.44	0.00268	459521.04	3778760.44	0.00274
459571.04	3778760.44	0.00280	459621.04	3778760.44	0.00285
459671.04	3778760.44	0.00290	459721.04	3778760.44	0.00298
459771.04	3778760.44	0.00318	459271.04	3778810.44	0.00252
459321.04	3778810.44	0.00261	459371.04	3778810.44	0.00270
459421.04	3778810.44	0.00278	459471.04	3778810.44	0.00286
459521.04	3778810.44	0.00293	459571.04	3778810.44	0.00300
459621.04	3778810.44	0.00306	459671.04	3778810.44	0.00312

459721.04 3778810.44 0.00321 459771.04 3778810.44 0.00341
459271.04 3778860.44 0.00266 459321.04 3778860.44 0.00276
459371.04 3778860.44 0.00287 459421.04 3778860.44 0.00296
459471.04 3778860.44 0.00306 459521.04 3778860.44 0.00314
459571.04 3778860.44 0.00322 459621.04 3778860.44 0.00330
459671.04 3778860.44 0.00337 459721.04 3778860.44 0.00346
459771.04 3778860.44 0.00366 459271.04 3778910.44 0.00282
459321.04 3778910.44 0.00293 459371.04 3778910.44 0.00305
459421.04 3778910.44 0.00317 459471.04 3778910.44 0.00328
459521.04 3778910.44 0.00338 459571.04 3778910.44 0.00347
459621.04 3778910.44 0.00356 459671.04 3778910.44 0.00365
459721.04 3778910.44 0.00375 459771.04 3778910.44 0.00396
459271.04 3778960.44 0.00300 459321.04 3778960.44 0.00313
459371.04 3778960.44 0.00327 459421.04 3778960.44 0.00340
459471.04 3778960.44 0.00353 459521.04 3778960.44 0.00365
459571.04 3778960.44 0.00377 459621.04 3778960.44 0.00387
459671.04 3778960.44 0.00398 459721.04 3778960.44 0.00409
459771.04 3778960.44 0.00431 459271.04 3779010.44 0.00318
459321.04 3779010.44 0.00334 459371.04 3779010.44 0.00349
459421.04 3779010.44 0.00366 459471.04 3779010.44 0.00381
459521.04 3779010.44 0.00396 459571.04 3779010.44 0.00409
459621.04 3779010.44 0.00422 459671.04 3779010.44 0.00434
459721.04 3779010.44 0.00447 459771.04 3779010.44 0.00470

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
459271.04	3779060.44	0.00337	459321.04	3779060.44	0.00356
459371.04	3779060.44	0.00374	459421.04	3779060.44	0.00393
459471.04	3779060.44	0.00412	459521.04	3779060.44	0.00430
459571.04	3779060.44	0.00446	459621.04	3779060.44	0.00462
459671.04	3779060.44	0.00477	459721.04	3779060.44	0.00492
459771.04	3779060.44	0.00517	459271.04	3779110.44	0.00358
459321.04	3779110.44	0.00379	459371.04	3779110.44	0.00401
459421.04	3779110.44	0.00423	459471.04	3779110.44	0.00446
459521.04	3779110.44	0.00468	459571.04	3779110.44	0.00488
459621.04	3779110.44	0.00508	459671.04	3779110.44	0.00525
459721.04	3779110.44	0.00544	459771.04		

3779110.44 0.00572
459271.04 3779160.44 0.00380 459321.04
3779160.44 0.00405
459371.04 3779160.44 0.00431 459421.04
3779160.44 0.00457
459471.04 3779160.44 0.00484 459521.04
3779160.44 0.00510
459571.04 3779160.44 0.00536 459621.04
3779160.44 0.00560
459671.04 3779160.44 0.00582 459721.04
3779160.44 0.00605
459771.04 3779160.44 0.00636 459271.04
3779210.44 0.00403
459321.04 3779210.44 0.00432 459371.04
3779210.44 0.00462
459421.04 3779210.44 0.00493 459471.04
3779210.44 0.00525
459521.04 3779210.44 0.00558 459571.04
3779210.44 0.00590
459621.04 3779210.44 0.00620 459671.04
3779210.44 0.00650
459721.04 3779210.44 0.00678 459771.04
3779210.44 0.00713
459271.04 3779260.44 0.00428 459321.04
3779260.44 0.00460
459371.04 3779260.44 0.00496 459421.04
3779260.44 0.00533
459471.04 3779260.44 0.00572 459521.04
3779260.44 0.00613
459571.04 3779260.44 0.00652 459621.04
3779260.44 0.00691
459671.04 3779260.44 0.00730 459721.04
3779260.44 0.00765
459771.04 3779260.44 0.00807 459271.04
3779310.44 0.00453
459321.04 3779310.44 0.00491 459371.04
3779310.44 0.00532
459421.04 3779310.44 0.00576 459471.04
3779310.44 0.00623
459521.04 3779310.44 0.00674 459571.04
3779310.44 0.00723
459621.04 3779310.44 0.00774 459671.04
3779310.44 0.00825
459721.04 3779310.44 0.00871 459771.04
3779310.44 0.00923
459271.04 3779360.44 0.00480 459321.04
3779360.44 0.00523
459371.04 3779360.44 0.00570 459421.04

```
3779360.44        0.00622
         459471.04    3779360.44        0.00679                             459521.04
3779360.44        0.00741
         459571.04    3779360.44        0.00805                             459621.04
3779360.44        0.00871
         459671.04    3779360.44        0.00939                             459721.04
3779360.44        0.01002
         459771.04    3779360.44        0.01067                             459271.04
3779410.44        0.00507
         459321.04    3779410.44        0.00556                             459371.04
3779410.44        0.00611
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                        ***        16:11:17

                                   PAGE  38
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   5
YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     L0008261    , L0008262
, L0008263    , L0008264    , L0008265    ,
                 L0008266    , L0008267    , L0008268    , L0008269    , L0008270
, L0008271    , L0008272    , L0008273    ,
                 L0008274    , L0008275    , L0008276    , L0008277    , L0008278
, L0008279    , L0008280    , L0008281    ,
                 L0008282    , L0008283    , L0008284    , L0008285    , L0008286
, L0008287    , L0008288    ,  . . .      ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                         ** CONC OF PM_10    IN MICROGRAMS/M**3
                   **

       X-COORD (M)   Y-COORD (M)        CONC                          X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
         459421.04    3779410.44        0.00671                             459471.04
3779410.44        0.00741
         459521.04    3779410.44        0.00816                             459571.04
3779410.44        0.00899
         459621.04    3779410.44        0.00985                             459671.04
3779410.44        0.01077
         459721.04    3779410.44        0.01163                             459771.04
3779410.44        0.01250
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         459271.04    3779460.44        0.00534                    459321.04
3779460.44        0.00589
         459371.04    3779460.44        0.00652                    459421.04
3779460.44        0.00723
         459471.04    3779460.44        0.00807                    459521.04
3779460.44        0.00900
         459571.04    3779460.44        0.01005                    459621.04
3779460.44        0.01118
         459671.04    3779460.44        0.01243                    459721.04
3779460.44        0.01365
         459771.04    3779460.44        0.01487                    459271.04
3779510.44        0.00561
         459321.04    3779510.44        0.00622                    459371.04
3779510.44        0.00694
         459421.04    3779510.44        0.00778                    459471.04
3779510.44        0.00876
         459521.04    3779510.44        0.00990                    459571.04
3779510.44        0.01124
         459621.04    3779510.44        0.01274                    459671.04
3779510.44        0.01443
         459721.04    3779510.44        0.01620                    459771.04
3779510.44        0.01799
         459271.04    3779560.44        0.00587                    459321.04
3779560.44        0.00655
         459371.04    3779560.44        0.00736                    459421.04
3779560.44        0.00832
         459471.04    3779560.44        0.00948                    459521.04
3779560.44        0.01086
         459571.04    3779560.44        0.01255                    459621.04
3779560.44        0.01453
         459671.04    3779560.44        0.01687                    459721.04
3779560.44        0.01946
         459771.04    3779560.44        0.02222                    459271.04
3779610.44        0.00612
         459321.04    3779610.44        0.00687                    459371.04
3779610.44        0.00777
         459421.04    3779610.44        0.00886                    459471.04
3779610.44        0.01020
         459521.04    3779610.44        0.01186                    459571.04
3779610.44        0.01394
         459621.04    3779610.44        0.01655                    459671.04
3779610.44        0.01977
         459721.04    3779610.44        0.02364                    459771.04
3779610.44        0.02808
         459271.04    3779660.44        0.00634                    459321.04
3779660.44        0.00715
         459371.04    3779660.44        0.00815                    459421.04
3779660.44        0.00937
```

```
         459471.04    3779660.44        0.01090                        459521.04
3779660.44        0.01285
         459571.04    3779660.44        0.01538                        459621.04
3779660.44        0.01872
         459671.04    3779660.44        0.02316                        459721.04
3779660.44        0.02900
         459771.04    3779660.44        0.03650                        459271.04
3779710.44        0.00653
         459321.04    3779710.44        0.00740                        459371.04
3779710.44        0.00847
         459421.04    3779710.44        0.00981                        459471.04
3779710.44        0.01153
         459521.04    3779710.44        0.01377                        459571.04
3779710.44        0.01677
         459621.04    3779710.44        0.02092                        459671.04
3779710.44        0.02685
         459721.04    3779710.44        0.03558                        459771.04
3779710.44        0.04886
```



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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0008261    , L0008262
, L0008263    , L0008264    , L0008265    ,
                  L0008266    , L0008267    , L0008268    , L0008269    , L0008270
, L0008271    , L0008272    , L0008273    ,
                  L0008274    , L0008275    , L0008276    , L0008277    , L0008278
, L0008279    , L0008280    , L0008281    ,
                  L0008282    , L0008283    , L0008284    , L0008285    , L0008286
, L0008287    , L0008288    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                             ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
        460204.12   3779784.84        0.19696  (11061807)               460254.12
```

3779784.84 0.15632 (11061807)
460304.12 3779784.84 0.12929 (11061807) 460204.12
3779834.84 0.21369 (11061807)
460254.12 3779834.84 0.16789 (11061807) 460304.12
3779834.84 0.13616 (11061807)
460204.12 3779884.84 0.26496 (15102517) 460254.12
3779884.84 0.19256 (15102517)
460304.12 3779884.84 0.14520 (15102517) 460204.12
3779934.84 0.28411 (15102517)
460254.12 3779934.84 0.21811 (15102517) 460304.12
3779934.84 0.17173 (15102517)
460204.12 3779984.84 0.25495 (15102517) 460254.12
3779984.84 0.20361 (15102517)
460304.12 3779984.84 0.16764 (15102517) 460204.12
3780034.84 0.17711 (15102517)
460254.12 3780034.84 0.15536 (15102517) 460304.12
3780034.84 0.13738 (15102517)
460204.12 3780084.84 0.14597 (11062019) 460254.12
3780084.84 0.11772 (11060807)
460304.12 3780084.84 0.10176 (12091718) 460204.12
3780134.84 0.14489 (11011917)
460254.12 3780134.84 0.12248 (11062019) 460304.12
3780134.84 0.10155 (11092507)
460204.12 3780184.84 0.14511 (15073021) 460254.12
3780184.84 0.12069 (11090419)
460304.12 3780184.84 0.11763 (15092020) 460204.12
3780234.84 0.13723 (16062720)
460254.12 3780234.84 0.12397 (15073021) 460304.12
3780234.84 0.11439 (11090419)
460204.12 3780284.84 0.13021 (15081320) 460254.12
3780284.84 0.12231 (15101120)
460304.12 3780284.84 0.11521 (16062021) 460204.12
3780334.84 0.12057 (15062723)
460254.12 3780334.84 0.11542 (15081320) 460304.12
3780334.84 0.10955 (15101120)
460204.12 3780384.84 0.11449 (12101719) 460254.12
3780384.84 0.10801 (15081320)
460304.12 3780384.84 0.10344 (15101120) 460204.12
3780434.84 0.10883 (15091922)
460254.12 3780434.84 0.10407 (15092620) 460304.12
3780434.84 0.10153 (13062921)
460204.12 3780484.84 0.10395 (12092721) 460254.12
3780484.84 0.10039 (12101719)
460304.12 3780484.84 0.09516 (11082520) 460349.55
3779783.46 0.11067 (11061807)
460399.55 3779783.46 0.09513 (11061807) 460449.55
3779783.46 0.08264 (11061807)
460499.55 3779783.46 0.07234 (11061807) 460349.55

3779833.46 0.11475 (11061807)
460399.55 3779833.46 0.09619 (11061807) 460449.55
3779833.46 0.08150 (11061807)
460499.55 3779833.46 0.06971 (11061807) 460349.55
3779883.46 0.11346 (15102517)
460399.55 3779883.46 0.08939 (15102517) 460449.55
3779883.46 0.07125 (15102517)
460499.55 3779883.46 0.05795 (15102517) 460349.55
3779933.46 0.13898 (15102517)
460399.55 3779933.46 0.11222 (15102517) 460449.55
3779933.46 0.09139 (15102517)
460499.55 3779933.46 0.07597 (15102517) 460349.55
3779983.46 0.14215 (15102517)
460399.55 3779983.46 0.11957 (15102517) 460449.55
3779983.46 0.10099 (15102517)
460499.55 3779983.46 0.08576 (15102517) 460349.55
3780033.46 0.12360 (15102517)
460399.55 3780033.46 0.10893 (15102517) 460449.55
3780033.46 0.09658 (15102517)
460499.55 3780033.46 0.08504 (15102517) 460349.55
3780083.46 0.09077 (15102517)
460399.55 3780083.46 0.08594 (15102517) 460449.55
3780083.46 0.08018 (15102517)
460499.55 3780083.46 0.07423 (15102517) 460349.55
3780133.46 0.09017 (12091718)
460399.55 3780133.46 0.07754 (12091718) 460449.55
3780133.46 0.06786 (11063019)
460499.55 3780133.46 0.05965 (11063019) 460349.55
3780183.46 0.10396 (15092020)
460399.55 3780183.46 0.09329 (12091718) 460449.55
3780183.46 0.08159 (12091718)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286

, L0008287   , L0008288   , . . .   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460499.55	3780183.46	0.07162	(12091718)	460349.55	3780233.46	0.10411	(15092020)
460399.55	3780233.46	0.09603	(15092020)	460449.55	3780233.46	0.08073	(16102517)
460499.55	3780233.46	0.07353	(12091718)	460349.55	3780283.46	0.10550	(12091519)
460399.55	3780283.46	0.09736	(15092020)	460449.55	3780283.46	0.08792	(15092020)
460499.55	3780283.46	0.08177	(12071122)	460349.55	3780333.46	0.10377	(16062021)
460399.55	3780333.46	0.09566	(12091519)	460449.55	3780333.46	0.08666	(15062821)
460499.55	3780333.46	0.08177	(15092020)	460349.55	3780383.46	0.09812	(16062021)
460399.55	3780383.46	0.09370	(16062021)	460449.55	3780383.46	0.08594	(16072822)
460499.55	3780383.46	0.08184	(15062821)	460349.55	3780433.46	0.09594	(12080721)
460399.55	3780433.46	0.09093	(16062021)	460449.55	3780433.46	0.08554	(15102419)
460499.55	3780433.46	0.08137	(16072822)	460349.55	3780483.46	0.09301	(13062921)
460399.55	3780483.46	0.09104	(12080721)	460449.55	3780483.46	0.08654	(15062822)
460499.55	3780483.46	0.08065	(12081623)	459271.04	3777660.44	0.00858	(16012717)
459321.04	3777660.44	0.00857	(16012717)	459371.04	3777660.44	0.00826	(16012717)
459271.04	3777710.44	0.00885	(16012717)	459321.04	3777710.44	0.00893	(16012717)
459371.04	3777710.44	0.00869	(16012717)	459421.04	3777710.44	0.00816	(16012717)
459471.04	3777710.44	0.00740	(16012717)	459521.04	3777710.44	0.00646	(16012717)
459271.04	3777760.44	0.00910	(16012717)	459321.04	3777760.44	0.00929	(16012717)

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        459371.04   3777760.44        0.00913  (16012717)               459421.04
3777760.44        0.00866  (16012717)
        459471.04   3777760.44        0.00792  (16012717)               459521.04
3777760.44        0.00697  (16012717)
        459571.04   3777760.44        0.00593  (11112920)               459621.04
3777760.44        0.00603  (11090503)
        459671.04   3777760.44        0.00612  (11090503)               459721.04
3777760.44        0.00622  (15032520)
        459771.04   3777760.44        0.00650  (15032520)               459271.04
3777810.44        0.00932  (16012717)
        459321.04   3777810.44        0.00963  (16012717)               459371.04
3777810.44        0.00958  (16012717)
        459421.04   3777810.44        0.00916  (16012717)               459471.04
3777810.44        0.00848  (16012717)
        459521.04   3777810.44        0.00752  (16012717)               459571.04
3777810.44        0.00642  (16012717)
        459621.04   3777810.44        0.00621  (11090503)               459671.04
3777810.44        0.00633  (11090503)
        459721.04   3777810.44        0.00642  (15032520)               459771.04
3777810.44        0.00671  (15032520)
        459271.04   3777860.44        0.00954  (16012717)               459321.04
3777860.44        0.00997  (16012717)
        459371.04   3777860.44        0.01003  (16012717)               459421.04
3777860.44        0.00971  (16012717)
        459471.04   3777860.44        0.00907  (16012717)               459521.04
3777860.44        0.00811  (16012717)
        459571.04   3777860.44        0.00698  (16012717)               459621.04
3777860.44        0.00644  (11090503)
        459671.04   3777860.44        0.00656  (11090503)               459721.04
3777860.44        0.00664  (15032520)
        459771.04   3777860.44        0.00695  (15032520)               459271.04
3777910.44        0.00973  (16012717)
        459321.04   3777910.44        0.01031  (16012717)               459371.04
3777910.44        0.01048  (16012717)
        459421.04   3777910.44        0.01027  (16012717)               459471.04
3777910.44        0.00968  (16012717)
        459521.04   3777910.44        0.00874  (16012717)               459571.04
3777910.44        0.00758  (16012717)
        459621.04   3777910.44        0.00667  (11090503)               459671.04
3777910.44        0.00680  (11090503)
        459721.04   3777910.44        0.00686  (11090503)               459771.04
3777910.44        0.00718  (15032520)
        459271.04   3777960.44        0.00987  (16012717)               459321.04
3777960.44        0.01060  (16012717)
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 , L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 , L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 , L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459371.04	3777960.44	0.01092	(16012717)	459421.04	3777960.44	0.01084	(16012717)
459471.04	3777960.44	0.01032	(16012717)	459521.04	3777960.44	0.00942	(16012717)
459571.04	3777960.44	0.00824	(16012717)	459621.04	3777960.44	0.00692	(16012717)
459671.04	3777960.44	0.00704	(11090503)	459721.04	3777960.44	0.00712	(11090503)
459771.04	3777960.44	0.00742	(15032520)	459271.04	3778010.44	0.00997	(16012717)
459321.04	3778010.44	0.01086	(16012717)	459371.04	3778010.44	0.01137	(16012717)
459421.04	3778010.44	0.01144	(16012717)	459471.04	3778010.44	0.01100	(16012717)
459521.04	3778010.44	0.01015	(16012717)	459571.04	3778010.44	0.00897	(16012717)
459621.04	3778010.44	0.00760	(16012717)	459671.04	3778010.44	0.00731	(11090503)
459721.04	3778010.44	0.00742	(11090503)	459771.04	3778010.44	0.00771	(15032520)
459271.04	3778060.44	0.01005	(16012717)	459321.04	3778060.44	0.01112	(16012717)
459371.04	3778060.44	0.01182	(16012717)	459421.04			

3778060.44 0.01203 (16012717)
459471.04 3778060.44 0.01173 (16012717) 459521.04
3778060.44 0.01095 (16012717)
459571.04 3778060.44 0.00977 (16012717) 459621.04
3778060.44 0.00834 (16012717)
459671.04 3778060.44 0.00758 (11090503) 459721.04
3778060.44 0.00771 (11090503)
459771.04 3778060.44 0.00800 (15032520) 459271.04
3778110.44 0.01008 (16012717)
459321.04 3778110.44 0.01136 (16012717) 459371.04
3778110.44 0.01224 (16012717)
459421.04 3778110.44 0.01265 (16012717) 459471.04
3778110.44 0.01250 (16012717)
459521.04 3778110.44 0.01180 (16012717) 459571.04
3778110.44 0.01065 (16012717)
459621.04 3778110.44 0.00917 (16012717) 459671.04
3778110.44 0.00786 (11090503)
459721.04 3778110.44 0.00800 (11090503) 459771.04
3778110.44 0.00828 (15032520)
459271.04 3778160.44 0.01008 (16012717) 459321.04
3778160.44 0.01155 (16012717)
459371.04 3778160.44 0.01263 (16012717) 459421.04
3778160.44 0.01327 (16012717)
459471.04 3778160.44 0.01330 (16012717) 459521.04
3778160.44 0.01271 (16012717)
459571.04 3778160.44 0.01160 (16012717) 459621.04
3778160.44 0.01008 (16012717)
459671.04 3778160.44 0.00839 (16012717) 459721.04
3778160.44 0.00835 (11090503)
459771.04 3778160.44 0.00862 (15032520) 459271.04
3778210.44 0.01003 (16012717)
459321.04 3778210.44 0.01170 (16012717) 459371.04
3778210.44 0.01300 (16012717)
459421.04 3778210.44 0.01388 (16012717) 459471.04
3778210.44 0.01412 (16012717)
459521.04 3778210.44 0.01367 (16012717) 459571.04
3778210.44 0.01262 (16012717)
459621.04 3778210.44 0.01109 (16012717) 459671.04
3778210.44 0.00930 (16012717)
459721.04 3778210.44 0.00868 (11090503) 459771.04
3778210.44 0.00895 (15032520)
459271.04 3778260.44 0.00991 (16012717) 459321.04
3778260.44 0.01178 (16012717)
459371.04 3778260.44 0.01334 (16012717) 459421.04
3778260.44 0.01447 (16012717)
459471.04 3778260.44 0.01494 (16012717) 459521.04
3778260.44 0.01468 (16012717)
459571.04 3778260.44 0.01371 (16012717) 459621.04

3778260.44 0.01218 (16012717)
  459671.04 3778260.44 0.01031 (16012717) 459721.04
3778260.44 0.00905 (11090503)
  459771.04 3778260.44 0.00930 (15032520) 459271.04
3778310.44 0.00972 (16012717)
  459321.04 3778310.44 0.01179 (16012717) 459371.04
3778310.44 0.01363 (16012717)
  459421.04 3778310.44 0.01502 (16012717) 459471.04
3778310.44 0.01576 (16012717)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459521.04	3778310.44	0.01571	(16012717)	459571.04	3778310.44	0.01488	(16012717)
459621.04	3778310.44	0.01338	(16012717)	459671.04	3778310.44	0.01143	(16012717)
459721.04	3778310.44	0.00949	(11090503)	459771.04	3778310.44	0.00971	(15032520)
459271.04	3778360.44	0.00946	(16012717)	459321.04	3778360.44	0.01171	(16012717)
459371.04	3778360.44	0.01378	(16012717)	459421.04	3778360.44	0.01550	(16012717)

459471.04 3778360.44 0.01655 (16012717) 459521.04 3778360.44 0.01678 (16012717)
459571.04 3778360.44 0.01612 (16012717) 459621.04 3778360.44 0.01467 (16012717)
459671.04 3778360.44 0.01267 (16012717) 459721.04 3778360.44 0.01045 (16012717)
459771.04 3778360.44 0.01016 (11090503) 459271.04 3778410.44 0.00917 (16111318)
459321.04 3778410.44 0.01157 (16012717) 459371.04 3778410.44 0.01393 (16012717)
459421.04 3778410.44 0.01593 (16012717) 459471.04 3778410.44 0.01730 (16012717)
459521.04 3778410.44 0.01784 (16012717) 459571.04 3778410.44 0.01743 (16012717)
459621.04 3778410.44 0.01609 (16012717) 459671.04 3778410.44 0.01405 (16012717)
459721.04 3778410.44 0.01168 (16012717) 459771.04 3778410.44 0.01065 (11090503)
459271.04 3778460.44 0.00957 (16111318) 459321.04 3778460.44 0.01132 (16012717)
459371.04 3778460.44 0.01396 (16012717) 459421.04 3778460.44 0.01634 (16012717)
459471.04 3778460.44 0.01808 (16012717) 459521.04 3778460.44 0.01893 (16012717)
459571.04 3778460.44 0.01877 (16012717) 459621.04 3778460.44 0.01762 (16012717)
459671.04 3778460.44 0.01557 (16012717) 459721.04 3778460.44 0.01307 (16012717)
459771.04 3778460.44 0.01121 (11090503) 459271.04 3778510.44 0.00997 (16111318)
459321.04 3778510.44 0.01099 (16012717) 459371.04 3778510.44 0.01387 (16012717)
459421.04 3778510.44 0.01659 (16012717) 459471.04 3778510.44 0.01878 (16012717)
459521.04 3778510.44 0.02009 (16012717) 459571.04 3778510.44 0.02022 (16012717)
459621.04 3778510.44 0.01926 (16012717) 459671.04 3778510.44 0.01725 (16012717)
459721.04 3778510.44 0.01461 (16012717) 459771.04 3778510.44 0.01214 (16012717)
459271.04 3778560.44 0.01040 (16110818) 459321.04 3778560.44 0.01063 (16111318)
459371.04 3778560.44 0.01365 (16012717) 459421.04 3778560.44 0.01672 (16012717)
459471.04 3778560.44 0.01936 (16012717) 459521.04 3778560.44 0.02114 (16012717)
459571.04 3778560.44 0.02174 (16012717) 459621.04 3778560.44 0.02103 (16012717)

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        459671.04   3778560.44        0.01910  (16012717)                459721.04
3778560.44        0.01636  (16012717)
        459771.04   3778560.44        0.01364  (16012717)                459271.04
3778610.44        0.01068  (16110818)
        459321.04   3778610.44        0.01096  (16111318)                459371.04
3778610.44        0.01330  (16012717)
        459421.04   3778610.44        0.01671  (16012717)                459471.04
3778610.44        0.01981  (16012717)
        459521.04   3778610.44        0.02212  (16012717)                459571.04
3778610.44        0.02324  (16012717)
        459621.04   3778610.44        0.02288  (16012717)                459671.04
3778610.44        0.02112  (16012717)
        459721.04   3778610.44        0.01832  (16012717)                459771.04
3778610.44        0.01535  (16012717)
        459271.04   3778660.44        0.01137  (16110818)                459321.04
3778660.44        0.01171  (16110818)
        459371.04   3778660.44        0.01285  (16012717)                459421.04
3778660.44        0.01661  (16012717)
        459471.04   3778660.44        0.02021  (16012717)                459521.04
3778660.44        0.02309  (16012717)
        459571.04   3778660.44        0.02474  (16012717)                459621.04
3778660.44        0.02485  (16012717)
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                              *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0008261    , L0008262
, L0008263    , L0008264    , L0008265    ,
                 L0008266    , L0008267    , L0008268    , L0008269    , L0008270
, L0008271    , L0008272    , L0008273    ,
                 L0008274    , L0008275    , L0008276    , L0008277    , L0008278
, L0008279    , L0008280    , L0008281    ,
                 L0008282    , L0008283    , L0008284    , L0008285    , L0008286
, L0008287    , L0008288    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                      ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
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Y-COORD (M)	CONC	(YYMMDDHH)			
459671.04	3778660.44	0.02332	(16012717)	459721.04	3778660.44	0.02051	(16012717)
459771.04	3778660.44	0.01730	(16012717)	459271.04	3778710.44	0.01198	(12092002)
459321.04	3778710.44	0.01237	(16110818)	459371.04	3778710.44	0.01263	(16111318)
459421.04	3778710.44	0.01633	(16012717)	459471.04	3778710.44	0.02042	(16012717)
459521.04	3778710.44	0.02393	(16012717)	459571.04	3778710.44	0.02624	(16012717)
459621.04	3778710.44	0.02691	(16012717)	459671.04	3778710.44	0.02571	(16012717)
459721.04	3778710.44	0.02298	(16012717)	459771.04	3778710.44	0.01955	(16012717)
459271.04	3778760.44	0.01262	(12092002)	459321.04	3778760.44	0.01289	(16110818)
459371.04	3778760.44	0.01328	(16110818)	459421.04	3778760.44	0.01585	(16012717)
459471.04	3778760.44	0.02042	(16012717)	459521.04	3778760.44	0.02462	(16012717)
459571.04	3778760.44	0.02770	(16012717)	459621.04	3778760.44	0.02901	(16012717)
459671.04	3778760.44	0.02831	(16012717)	459721.04	3778760.44	0.02572	(16012717)
459771.04	3778760.44	0.02212	(16012717)	459271.04	3778810.44	0.01329	(13111322)
459321.04	3778810.44	0.01360	(12092002)	459371.04	3778810.44	0.01399	(16110818)
459421.04	3778810.44	0.01521	(16012717)	459471.04	3778810.44	0.02023	(16012717)
459521.04	3778810.44	0.02512	(16012717)	459571.04	3778810.44	0.02902	(16012717)
459621.04	3778810.44	0.03119	(16012717)	459671.04	3778810.44	0.03108	(16012717)
459721.04	3778810.44	0.02878	(16012717)	459771.04	3778810.44	0.02505	(16012717)
459271.04	3778860.44	0.01398	(13111322)	459321.04	3778860.44	0.01431	(12092002)
459371.04	3778860.44	0.01462	(16110818)	459421.04	3778860.44	0.01514	(16110818)
459471.04	3778860.44	0.01980	(16012717)	459521.04	3778860.44	0.02538	(16012717)
459571.04	3778860.44	0.03020	(16012717)	459621.04	3778860.44	0.03334	(16012717)
459671.04	3778860.44	0.03402	(16012717)	459721.04			

3778860.44 0.03214 (16012717)
  459771.04 3778860.44 0.02840 (16012717) 459271.04
3778910.44 0.01475 (16020918)
  459321.04 3778910.44 0.01512 (13111322) 459371.04
3778910.44 0.01551 (12092002)
  459421.04 3778910.44 0.01598 (16110818) 459471.04
3778910.44 0.01911 (16012717)
  459521.04 3778910.44 0.02537 (16012717) 459571.04
3778910.44 0.03120 (16012717)
  459621.04 3778910.44 0.03545 (16012717) 459671.04
3778910.44 0.03715 (16012717)
  459721.04 3778910.44 0.03587 (16012717) 459771.04
3778910.44 0.03222 (16012717)
  459271.04 3778960.44 0.01576 (16020918) 459321.04
3778960.44 0.01611 (16020918)
  459371.04 3778960.44 0.01655 (13111322) 459421.04
3778960.44 0.01700 (12092002)
  459471.04 3778960.44 0.01820 (16012717) 459521.04
3778960.44 0.02510 (16012717)
  459571.04 3778960.44 0.03196 (16012717) 459621.04
3778960.44 0.03748 (16012717)
  459671.04 3778960.44 0.04039 (16012717) 459721.04
3778960.44 0.03997 (16012717)
  459771.04 3778960.44 0.03658 (16012717) 459271.04
3779010.44 0.01657 (16020918)
  459321.04 3779010.44 0.01723 (16020918) 459371.04
3779010.44 0.01764 (13111322)
  459421.04 3779010.44 0.01820 (12092002) 459471.04
3779010.44 0.01883 (12121616)
  459521.04 3779010.44 0.02448 (16012717) 459571.04
3779010.44 0.03238 (16012717)
  459621.04 3779010.44 0.03932 (16012717) 459671.04
3779010.44 0.04370 (16012717)
  459721.04 3779010.44 0.04442 (16012717) 459771.04
3779010.44 0.04152 (16012717)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                            *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                INCLUDING SOURCE(S):   L0008261   , L0008262 , L0008263   , L0008264   , L0008265   ,
                L0008266   , L0008267   , L0008268   , L0008269   , L0008270

, L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278
, L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286
, L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459271.04	3779060.44	0.01763	(16020919)	459321.04	3779060.44	0.01825	(16020918)
459371.04	3779060.44	0.01891	(16020918)	459421.04	3779060.44	0.01948	(13111322)
459471.04	3779060.44	0.02009	(12092002)	459521.04	3779060.44	0.02348	(16012717)
459571.04	3779060.44	0.03241	(16012717)	459621.04	3779060.44	0.04089	(16012717)
459671.04	3779060.44	0.04701	(16012717)	459721.04	3779060.44	0.04921	(16012717)
459771.04	3779060.44	0.04713	(16012717)	459271.04	3779110.44	0.01865	(16020919)
459321.04	3779110.44	0.01943	(16020919)	459371.04	3779110.44	0.02021	(16020918)
459421.04	3779110.44	0.02089	(16020918)	459471.04	3779110.44	0.02157	(12092002)
459521.04	3779110.44	0.02321	(12121616)	459571.04	3779110.44	0.03198	(16012717)
459621.04	3779110.44	0.04209	(16012717)	459671.04	3779110.44	0.05022	(16012717)
459721.04	3779110.44	0.05431	(16012717)	459771.04	3779110.44	0.05342	(16012717)
459271.04	3779160.44	0.01942	(16020919)	459321.04	3779160.44	0.02070	(16020919)
459371.04	3779160.44	0.02157	(16020919)	459421.04	3779160.44	0.02252	(16020918)
459471.04	3779160.44	0.02325	(13111322)	459521.04	3779160.44	0.02451	(12121616)
459571.04	3779160.44	0.03102	(16012717)	459621.04	3779160.44	0.04279	(16012717)
459671.04	3779160.44	0.05323	(16012717)	459721.04	3779160.44	0.05968	(16012717)

459771.04 3779160.44 0.06045 (16012717) 459271.04
3779210.44 0.02100 (11092608)
459321.04 3779210.44 0.02170 (16020919) 459371.04
3779210.44 0.02317 (16020919)
459421.04 3779210.44 0.02418 (13020917) 459471.04
3779210.44 0.02524 (16020918)
459521.04 3779210.44 0.02618 (13111322) 459571.04
3779210.44 0.02947 (16012717)
459621.04 3779210.44 0.04286 (16012717) 459671.04
3779210.44 0.05591 (16012717)
459721.04 3779210.44 0.06524 (16012717) 459771.04
3779210.44 0.06830 (16012717)
459271.04 3779260.44 0.02738 (11092608) 459321.04
3779260.44 0.02466 (11092608)
459371.04 3779260.44 0.02447 (16020919) 459421.04
3779260.44 0.02618 (13020917)
459471.04 3779260.44 0.02764 (13020917) 459521.04
3779260.44 0.02861 (16020918)
459571.04 3779260.44 0.03111 (12121616) 459621.04
3779260.44 0.04221 (16012717)
459671.04 3779260.44 0.05807 (16012717) 459721.04
3779260.44 0.07084 (16012717)
459771.04 3779260.44 0.07698 (16012717) 459271.04
3779310.44 0.03340 (11092608)
459321.04 3779310.44 0.03213 (11092608) 459371.04
3779310.44 0.02927 (11092608)
459421.04 3779310.44 0.02768 (16020919) 459471.04
3779310.44 0.03040 (13020917)
459521.04 3779310.44 0.03189 (13020917) 459571.04
3779310.44 0.03248 (13111322)
459621.04 3779310.44 0.04067 (16012717) 459671.04
3779310.44 0.05950 (16012717)
459721.04 3779310.44 0.07638 (16012717) 459771.04
3779310.44 0.08652 (16012717)
459271.04 3779360.44 0.03782 (11092608) 459321.04
3779360.44 0.03893 (11092608)
459371.04 3779360.44 0.03810 (11092608) 459421.04
3779360.44 0.03526 (11092608)
459471.04 3779360.44 0.03209 (13020917) 459521.04
3779360.44 0.03570 (13020917)
459571.04 3779360.44 0.03708 (13020917) 459621.04
3779360.44 0.04081 (12121616)
459671.04 3779360.44 0.05989 (16012717) 459721.04
3779360.44 0.08164 (16012717)
459771.04 3779360.44 0.09690 (16012717) 459271.04
3779410.44 0.03942 (11092608)
459321.04 3779410.44 0.04349 (11092608) 459371.04
3779410.44 0.04586 (11092608)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                             *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                 INCLUDING SOURCE(S):   L0008261   , L0008262 , L0008263   , L0008264   , L0008265   ,
                  L0008266   , L0008267   , L0008268   , L0008269   , L0008270 , L0008271   , L0008272   , L0008273   ,
                  L0008274   , L0008275   , L0008276   , L0008277   , L0008278 , L0008279   , L0008280   , L0008281   ,
                  L0008282   , L0008283   , L0008284   , L0008285   , L0008286 , L0008287   , L0008288   , . . .   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                              ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)
 -
        459421.04   3779410.44   0.04594 (11092608)   459471.04   3779410.44   0.04335 (11092608)
        459521.04   3779410.44   0.03827 (13020917)   459571.04   3779410.44   0.04248 (13020917)
        459621.04   3779410.44   0.04364 (13020917)   459671.04   3779410.44   0.05898 (16012717)
        459721.04   3779410.44   0.08627 (16012717)   459771.04   3779410.44   0.10813 (16012717)
        459271.04   3779460.44   0.03748 (11092608)   459321.04   3779460.44   0.04440 (11092608)
        459371.04   3779460.44   0.05054 (11092608)   459421.04   3779460.44   0.05492 (11092608)
        459471.04   3779460.44   0.05649 (11092608)   459521.04   3779460.44   0.05451 (11092608)
        459571.04   3779460.44   0.04888 (11092608)   459621.04   3779460.44   0.05135 (13020917)
        459671.04   3779460.44   0.05641 (16012717)   459721.04   3779460.44   0.08984 (16012717)
        459771.04   3779460.44   0.12027 (16012717)   459271.04

3779510.44 0.03217 (11092608)
459321.04 3779510.44 0.04097 (11092608) 459371.04
3779510.44 0.05042 (11092608)
459421.04 3779510.44 0.05952 (11092608) 459471.04
3779510.44 0.06690 (11092608)
459521.04 3779510.44 0.07095 (11092608) 459571.04
3779510.44 0.07025 (11092608)
459621.04 3779510.44 0.06418 (11092608) 459671.04
3779510.44 0.06339 (13020917)
459721.04 3779510.44 0.09167 (16012717) 459771.04
3779510.44 0.13329 (16012717)
459271.04 3779560.44 0.03070 (15100820) 459321.04
3779560.44 0.03374 (11092608)
459371.04 3779560.44 0.04490 (11092608) 459421.04
3779560.44 0.05768 (11092608)
459471.04 3779560.44 0.07096 (11092608) 459521.04
3779560.44 0.08290 (11092608)
459571.04 3779560.44 0.09106 (11092608) 459621.04
3779560.44 0.09288 (11092608)
459671.04 3779560.44 0.08686 (11092608) 459721.04
3779560.44 0.09082 (16012717)
459771.04 3779560.44 0.14702 (16012717) 459271.04
3779610.44 0.03161 (15100820)
459321.04 3779610.44 0.03501 (15100820) 459371.04
3779610.44 0.03866 (15100820)
459421.04 3779610.44 0.04916 (11092608) 459471.04
3779610.44 0.06628 (11092608)
459521.04 3779610.44 0.08548 (11092608) 459571.04
3779610.44 0.10451 (11092608)
459621.04 3779610.44 0.11977 (11092608) 459671.04
3779610.44 0.12691 (11092608)
459721.04 3779610.44 0.12241 (11092608) 459771.04
3779610.44 0.16063 (16012717)
459271.04 3779660.44 0.03278 (15031403) 459321.04
3779660.44 0.03612 (15031403)
459371.04 3779660.44 0.03986 (15110422) 459421.04
3779660.44 0.04493 (15100820)
459471.04 3779660.44 0.05346 (11092608) 459521.04
3779660.44 0.07622 (11092608)
459571.04 3779660.44 0.10393 (11092608) 459621.04
3779660.44 0.13438 (11092608)
459671.04 3779660.44 0.16292 (11092608) 459721.04
3779660.44 0.18208 (11092608)
459771.04 3779660.44 0.18383 (11092608) 459271.04
3779710.44 0.03399 (13112718)
459321.04 3779710.44 0.03758 (11011621) 459371.04
3779710.44 0.04187 (11011621)
459421.04 3779710.44 0.04679 (11011621) 459471.04

3779710.44 0.05305 (15031403)
459521.04 3779710.44 0.06080 (15100820) 459571.04
3779710.44 0.08748 (11092608)
459621.04 3779710.44 0.12778 (11092608) 459671.04
3779710.44 0.17778 (11092608)
459721.04 3779710.44 0.23389 (11092608) 459771.04
3779710.44 0.28562 (11092608)
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Fontana_Sierra Casa Grande\Fontana_Sierra Casa *** 03/19/20
*** AERMET - VERSION 16216 *** ***
*** 16:11:17

PAGE 46
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)
- -
460204.12 3779784.84 0.07315m (13112024) 460254.12
3779784.84 0.05344 (16051524)
460304.12 3779784.84 0.04317 (16051524) 460204.12
3779834.84 0.08983 (16051524)
460254.12 3779834.84 0.06783 (16051524) 460304.12
3779834.84 0.05362 (16051524)
460204.12 3779884.84 0.09657 (16051524) 460254.12
3779884.84 0.07341 (16051524)
460304.12 3779884.84 0.05812 (16051524) 460204.12
3779934.84 0.09032 (16051524)
460254.12 3779934.84 0.06954 (16051524) 460304.12
3779934.84 0.05570 (16051524)

460204.12 3779984.84 0.08283 (12050124) 460254.12 3779984.84 0.06056 (12050124)
460304.12 3779984.84 0.04850 (13111624) 460204.12 3780034.84 0.08034m (16031424)
460254.12 3780034.84 0.06240m (12042324) 460304.12 3780034.84 0.05033m (12042324)
460204.12 3780084.84 0.07901m (16031424) 460254.12 3780084.84 0.06235m (16031424)
460304.12 3780084.84 0.05091m (12042324) 460204.12 3780134.84 0.07615m (16031424)
460254.12 3780134.84 0.06342m (16031424) 460304.12 3780134.84 0.05212m (16031424)
460204.12 3780184.84 0.07097 (12120224) 460254.12 3780184.84 0.06130m (16031424)
460304.12 3780184.84 0.05804m (16031424) 460204.12 3780234.84 0.06103 (12120224)
460254.12 3780234.84 0.05881 (12120224) 460304.12 3780234.84 0.05527m (16031424)
460204.12 3780284.84 0.05044 (12120224) 460254.12 3780284.84 0.05285 (12120224)
460304.12 3780284.84 0.05275 (12120224) 460204.12 3780334.84 0.04037 (12120224)
460254.12 3780334.84 0.04419 (12120224) 460304.12 3780334.84 0.04635 (12120224)
460204.12 3780384.84 0.03204 (12120224) 460254.12 3780384.84 0.03609 (12120224)
460304.12 3780384.84 0.03926 (12120224) 460204.12 3780434.84 0.02642 (13120724)
460254.12 3780434.84 0.02932 (12120224) 460304.12 3780434.84 0.03290 (12120224)
460204.12 3780484.84 0.02447 (13120724) 460254.12 3780484.84 0.02367 (12120224)
460304.12 3780484.84 0.02704 (12120224) 460349.55 3779783.46 0.03622 (16051524)
460399.55 3779783.46 0.03074 (16051524) 460449.55 3779783.46 0.02649 (16051524)
460499.55 3779783.46 0.02311 (16051524) 460349.55 3779833.46 0.04427 (16051524)
460399.55 3779833.46 0.03684 (16051524) 460449.55 3779833.46 0.03122 (16051524)
460499.55 3779833.46 0.02697 (16051524) 460349.55 3779883.46 0.04809 (16051524)
460399.55 3779883.46 0.03998 (16051524) 460449.55 3779883.46 0.03374 (16051524)
460499.55 3779883.46 0.02898 (16051524) 460349.55 3779933.46 0.04670 (16051524)
460399.55 3779933.46 0.03912 (16051524) 460449.55 3779933.46 0.03330 (16051524)

460499.55 3779933.46 0.02879 (16051524) 460349.55
3779983.46 0.04053 (13111624)
460399.55 3779983.46 0.03462 (16051524) 460449.55
3779983.46 0.03003 (16051524)
460499.55 3779983.46 0.02632 (16051524) 460349.55
3780033.46 0.04019m (12042324)
460399.55 3780033.46 0.03204 (13111624) 460449.55
3780033.46 0.02887 (13111624)
460499.55 3780033.46 0.02421 (13111624) 460349.55
3780083.46 0.04383m (12042324)
460399.55 3780083.46 0.03716m (12042324) 460449.55
3780083.46 0.03075m (12042324)
460499.55 3780083.46 0.02672 (13111624) 460349.55
3780133.46 0.04331m (16031424)
460399.55 3780133.46 0.03688m (12042324) 460449.55
3780133.46 0.03264m (12042324)
460499.55 3780133.46 0.02830m (12042324) 460349.55
3780183.46 0.04934m (16031424)
460399.55 3780183.46 0.04115m (16031424) 460449.55
3780183.46 0.03532m (12042324)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)

- -

460499.55 3780183.46 0.03188m (12042324) 460349.55 3780233.46 0.04972m (16031424)
460399.55 3780233.46 0.04358m (16031424) 460449.55 3780233.46 0.03518m (16031424)
460499.55 3780233.46 0.03035m (12042324) 460349.55 3780283.46 0.04970 (12120224)
460399.55 3780283.46 0.04473 (12120224) 460449.55 3780283.46 0.03825m (16031424)
460499.55 3780283.46 0.03321m (16031424) 460349.55 3780333.46 0.04612 (12120224)
460399.55 3780333.46 0.04370 (12120224) 460449.55 3780333.46 0.03895 (12120224)
460499.55 3780333.46 0.03486 (12120224) 460349.55 3780383.46 0.04075 (12120224)
460399.55 3780383.46 0.04068 (12120224) 460449.55 3780383.46 0.03825 (12120224)
460499.55 3780383.46 0.03557 (12120224) 460349.55 3780433.46 0.03535 (12120224)
460399.55 3780433.46 0.03659 (12120224) 460449.55 3780433.46 0.03622 (12120224)
460499.55 3780433.46 0.03491 (12120224) 460349.55 3780483.46 0.02981 (12120224)
460399.55 3780483.46 0.03207 (12120224) 460449.55 3780483.46 0.03304 (12120224)
460499.55 3780483.46 0.03260 (12120224) 459271.04 3777660.44 0.00170m (11122824)
459321.04 3777660.44 0.00172m (11122824) 459371.04 3777660.44 0.00173m (11122824)
459271.04 3777710.44 0.00175 (13111324) 459321.04 3777710.44 0.00178m (11122824)
459371.04 3777710.44 0.00178m (11122824) 459421.04 3777710.44 0.00179m (11122824)
459471.04 3777710.44 0.00181m (11122824) 459521.04 3777710.44 0.00181m (11122824)
459271.04 3777760.44 0.00182 (13111324) 459321.04 3777760.44 0.00183m (11122824)
459371.04 3777760.44 0.00184m (11122824) 459421.04 3777760.44 0.00185m (11122824)
459471.04 3777760.44 0.00188m (11122824) 459521.04 3777760.44 0.00188m (11122824)
459571.04 3777760.44 0.00187m (11122824) 459621.04 3777760.44 0.00190m (15010924)
459671.04 3777760.44 0.00196m (15010924) 459721.04 3777760.44 0.00207m (15010924)
459771.04 3777760.44 0.00247m (15010924) 459271.04 3777810.44 0.00189 (13111324)
459321.04 3777810.44 0.00189m (11122824) 459371.04

3777810.44 0.00191m (11122824)
  459421.04 3777810.44 0.00191m (11122824) 459471.04
3777810.44 0.00195m (11122824)
  459521.04 3777810.44 0.00196m (11122824) 459571.04
3777810.44 0.00195m (11122824)
  459621.04 3777810.44 0.00197m (15010924) 459671.04
3777810.44 0.00204m (15010924)
  459721.04 3777810.44 0.00215m (15010924) 459771.04
3777810.44 0.00254m (15010924)
  459271.04 3777860.44 0.00198 (13111324) 459321.04
3777860.44 0.00196m (11122824)
  459371.04 3777860.44 0.00198m (11122824) 459421.04
3777860.44 0.00199m (11122824)
  459471.04 3777860.44 0.00204m (11122824) 459521.04
3777860.44 0.00204m (11122824)
  459571.04 3777860.44 0.00204m (11122824) 459621.04
3777860.44 0.00205m (15010924)
  459671.04 3777860.44 0.00212m (15010924) 459721.04
3777860.44 0.00223m (15010924)
  459771.04 3777860.44 0.00262m (15010924) 459271.04
3777910.44 0.00209 (13111324)
  459321.04 3777910.44 0.00207 (13111324) 459371.04
3777910.44 0.00206m (11122824)
  459421.04 3777910.44 0.00208m (11122824) 459471.04
3777910.44 0.00212m (11122824)
  459521.04 3777910.44 0.00212m (11122824) 459571.04
3777910.44 0.00212m (11122824)
  459621.04 3777910.44 0.00214m (15010924) 459671.04
3777910.44 0.00220m (15010924)
  459721.04 3777910.44 0.00232m (15010924) 459771.04
3777910.44 0.00270m (15010924)
  459271.04 3777960.44 0.00218 (13111324) 459321.04
3777960.44 0.00216 (13111324)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   L0008261   , L0008262 , L0008263   , L0008264   , L0008265   ,
                 L0008266   , L0008267   , L0008268   , L0008269   , L0008270 , L0008271   , L0008272   , L0008273   ,
                 L0008274   , L0008275   , L0008276   , L0008277   , L0008278

, L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286
, L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
459371.04	3777960.44	0.00213m (11122824)	459421.04	3777960.44	0.00218m (11122824)
459471.04	3777960.44	0.00220m (11122824)	459521.04	3777960.44	0.00222m (11122824)
459571.04	3777960.44	0.00222m (11122824)	459621.04	3777960.44	0.00222m (15010924)
459671.04	3777960.44	0.00229m (15010924)	459721.04	3777960.44	0.00241m (15010924)
459771.04	3777960.44	0.00279m (15010924)	459271.04	3778010.44	0.00227 (13111324)
459321.04	3778010.44	0.00224 (13111324)	459371.04	3778010.44	0.00223m (11122824)
459421.04	3778010.44	0.00228m (11122824)	459471.04	3778010.44	0.00229m (11122824)
459521.04	3778010.44	0.00231m (11122824)	459571.04	3778010.44	0.00232m (11122824)
459621.04	3778010.44	0.00232m (15010924)	459671.04	3778010.44	0.00239m (15010924)
459721.04	3778010.44	0.00251m (15010924)	459771.04	3778010.44	0.00289m (15010924)
459271.04	3778060.44	0.00237m (11010224)	459321.04	3778060.44	0.00235 (13111324)
459371.04	3778060.44	0.00234 (13111324)	459421.04	3778060.44	0.00236m (11122824)
459471.04	3778060.44	0.00239m (11122824)	459521.04	3778060.44	0.00241m (11122824)
459571.04	3778060.44	0.00242m (11122824)	459621.04	3778060.44	0.00242m (15010924)
459671.04	3778060.44	0.00249m (15010924)	459721.04	3778060.44	0.00261m (15010924)
459771.04	3778060.44	0.00299m (15010924)	459271.04	3778110.44	0.00249m (11010224)
459321.04	3778110.44	0.00248 (13111324)	459371.04	3778110.44	0.00245 (13111324)

459421.04 3778110.44 0.00246m (11122824) 459471.04 3778110.44 0.00250m (11122824)
459521.04 3778110.44 0.00252m (11122824) 459571.04 3778110.44 0.00253m (11122824)
459621.04 3778110.44 0.00252m (15010924) 459671.04 3778110.44 0.00260m (15010924)
459721.04 3778110.44 0.00272m (15010924) 459771.04 3778110.44 0.00309m (15010924)
459271.04 3778160.44 0.00263m (11010224) 459321.04 3778160.44 0.00260m (11010224)
459371.04 3778160.44 0.00254 (13111324) 459421.04 3778160.44 0.00256m (11122824)
459471.04 3778160.44 0.00261m (11122824) 459521.04 3778160.44 0.00263m (11122824)
459571.04 3778160.44 0.00265m (11122824) 459621.04 3778160.44 0.00264m (11122824)
459671.04 3778160.44 0.00271m (15010924) 459721.04 3778160.44 0.00284m (15010924)
459771.04 3778160.44 0.00321m (15010924) 459271.04 3778210.44 0.00277m (11010224)
459321.04 3778210.44 0.00274m (11010224) 459371.04 3778210.44 0.00266 (13111324)
459421.04 3778210.44 0.00268 (13111324) 459471.04 3778210.44 0.00272m (11122824)
459521.04 3778210.44 0.00275m (11122824) 459571.04 3778210.44 0.00277m (11122824)
459621.04 3778210.44 0.00277m (11122824) 459671.04 3778210.44 0.00284m (15010924)
459721.04 3778210.44 0.00296m (15010924) 459771.04 3778210.44 0.00334m (15010924)
459271.04 3778260.44 0.00291m (11010224) 459321.04 3778260.44 0.00290m (11010224)
459371.04 3778260.44 0.00282m (11010224) 459421.04 3778260.44 0.00282 (13111324)
459471.04 3778260.44 0.00284m (11122824) 459521.04 3778260.44 0.00288m (11122824)
459571.04 3778260.44 0.00290m (11122824) 459621.04 3778260.44 0.00291m (11122824)
459671.04 3778260.44 0.00297m (15010924) 459721.04 3778260.44 0.00310m (15010924)
459771.04 3778260.44 0.00347m (15010924) 459271.04 3778310.44 0.00306m (11010224)
459321.04 3778310.44 0.00305m (11010224) 459371.04 3778310.44 0.00301m (11010224)
459421.04 3778310.44 0.00297 (13111324) 459471.04 3778310.44 0.00295m (11122824)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                            *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                INCLUDING SOURCE(S):   L0008261   , L0008262 , L0008263   , L0008264   , L0008265   ,
                L0008266   , L0008267   , L0008268   , L0008269   , L0008270 , L0008271   , L0008272   , L0008273   ,
                L0008274   , L0008275   , L0008276   , L0008277   , L0008278 , L0008279   , L0008280   , L0008281   ,
                L0008282   , L0008283   , L0008284   , L0008285   , L0008286 , L0008287   , L0008288   , . . .   ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                              ** CONC OF PM_10   IN MICROGRAMS/M**3
                **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)
 -
        459521.04   3778310.44   0.00301m (11122824)   459571.04   3778310.44   0.00304m (11122824)
        459621.04   3778310.44   0.00305m (11122824)   459671.04   3778310.44   0.00312m (15010924)
        459721.04   3778310.44   0.00325m (15010924)   459771.04   3778310.44   0.00362m (15010924)
        459271.04   3778360.44   0.00321m (11010224)   459321.04   3778360.44   0.00321m (11010224)
        459371.04   3778360.44   0.00314m (11010224)   459421.04   3778360.44   0.00313m (11010224)
        459471.04   3778360.44   0.00310 (13111324)   459521.04   3778360.44   0.00315m (11122824)
        459571.04   3778360.44   0.00319m (11122824)   459621.04   3778360.44   0.00321m (11122824)
        459671.04   3778360.44   0.00328m (15010924)   459721.04   3778360.44   0.00342m (15010924)
        459771.04   3778360.44   0.00379m (15010924)   459271.04   3778410.44   0.00338m (11010224)
        459321.04   3778410.44   0.00341m (11010224)   459371.04   3778410.44   0.00339m (11010224)
        459421.04   3778410.44   0.00333m (11010224)   459471.04

3778410.44 0.00326m (11010224)
459521.04 3778410.44 0.00327m (11122824) 459571.04
3778410.44 0.00335m (11122824)
459621.04 3778410.44 0.00339m (11122824) 459671.04
3778410.44 0.00346m (15010924)
459721.04 3778410.44 0.00360m (15010924) 459771.04
3778410.44 0.00397m (15010924)
459271.04 3778460.44 0.00356m (11010224) 459321.04
3778460.44 0.00360m (11010224)
459371.04 3778460.44 0.00361m (11010224) 459421.04
3778460.44 0.00359m (11010224)
459471.04 3778460.44 0.00352m (11010224) 459521.04
3778460.44 0.00343m (11122824)
459571.04 3778460.44 0.00350m (11122824) 459621.04
3778460.44 0.00359m (11122824)
459671.04 3778460.44 0.00365m (15010924) 459721.04
3778460.44 0.00379m (15010924)
459771.04 3778460.44 0.00416m (15010924) 459271.04
3778510.44 0.00375m (11010224)
459321.04 3778510.44 0.00381m (11010224) 459371.04
3778510.44 0.00383m (11010224)
459421.04 3778510.44 0.00382m (11010224) 459471.04
3778510.44 0.00379m (11010224)
459521.04 3778510.44 0.00373m (11010224) 459571.04
3778510.44 0.00371 (16012724)
459621.04 3778510.44 0.00379m (11122824) 459671.04
3778510.44 0.00386m (15010924)
459721.04 3778510.44 0.00400m (15010924) 459771.04
3778510.44 0.00438m (15010924)
459271.04 3778560.44 0.00392m (11010224) 459321.04
3778560.44 0.00400m (11010224)
459371.04 3778560.44 0.00405m (11010224) 459421.04
3778560.44 0.00405m (11010224)
459471.04 3778560.44 0.00404m (11010224) 459521.04
3778560.44 0.00398m (11010224)
459571.04 3778560.44 0.00396m (11122824) 459621.04
3778560.44 0.00403m (11122824)
459671.04 3778560.44 0.00409m (15010924) 459721.04
3778560.44 0.00424m (15010924)
459771.04 3778560.44 0.00461m (15010924) 459271.04
3778610.44 0.00405m (11010224)
459321.04 3778610.44 0.00418m (11010224) 459371.04
3778610.44 0.00427m (11010224)
459421.04 3778610.44 0.00429m (11010224) 459471.04
3778610.44 0.00428m (11010224)
459521.04 3778610.44 0.00425m (11010224) 459571.04
3778610.44 0.00420m (11010224)
459621.04 3778610.44 0.00428 (16012724) 459671.04

3778610.44 0.00434m (15010924)
  459721.04 3778610.44 0.00449m (15010924) 459771.04
3778610.44 0.00488m (15010924)
  459271.04 3778660.44 0.00431m (11010224) 459321.04
3778660.44 0.00446m (11010224)
  459371.04 3778660.44 0.00456m (11010224) 459421.04
3778660.44 0.00462m (11010224)
  459471.04 3778660.44 0.00464m (11010224) 459521.04
3778660.44 0.00460m (11010224)
  459571.04 3778660.44 0.00452m (11010224) 459621.04
3778660.44 0.00456 (16012724)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0008261 , L0008262 , L0008263 , L0008264 , L0008265 ,
  L0008266 , L0008267 , L0008268 , L0008269 , L0008270 , L0008271 , L0008272 , L0008273 ,
  L0008274 , L0008275 , L0008276 , L0008277 , L0008278 , L0008279 , L0008280 , L0008281 ,
  L0008282 , L0008283 , L0008284 , L0008285 , L0008286 , L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459671.04	3778660.44	0.00461m	(15010924)	459721.04	3778660.44	0.00478m	(15010924)
459771.04	3778660.44	0.00516m	(15010924)	459271.04	3778710.44	0.00461	(13120824)
459321.04	3778710.44	0.00471m	(11010224)	459371.04	3778710.44	0.00485m	(11010224)
459421.04	3778710.44	0.00493m	(11010224)	459471.04	3778710.44	0.00497m	(11010224)

459521.04 3778710.44 0.00495m (11010224) 459571.04
3778710.44 0.00489m (11010224)
459621.04 3778710.44 0.00487 (16012724) 459671.04
3778710.44 0.00493 (16012724)
459721.04 3778710.44 0.00510m (15010924) 459771.04
3778710.44 0.00549m (15010924)
459271.04 3778760.44 0.00489 (13120824) 459321.04
3778760.44 0.00495 (13120824)
459371.04 3778760.44 0.00511m (11010224) 459421.04
3778760.44 0.00524m (11010224)
459471.04 3778760.44 0.00532m (11010224) 459521.04
3778760.44 0.00534m (11010224)
459571.04 3778760.44 0.00531m (11010224) 459621.04
3778760.44 0.00520m (11010224)
459671.04 3778760.44 0.00529 (16012724) 459721.04
3778760.44 0.00546m (15010924)
459771.04 3778760.44 0.00586m (15010924) 459271.04
3778810.44 0.00520 (13120824)
459321.04 3778810.44 0.00529 (13120824) 459371.04
3778810.44 0.00540m (11010224)
459421.04 3778810.44 0.00558m (11010224) 459471.04
3778810.44 0.00571m (11010224)
459521.04 3778810.44 0.00576m (11010224) 459571.04
3778810.44 0.00574m (11010224)
459621.04 3778810.44 0.00567m (11010224) 459671.04
3778810.44 0.00569 (16012724)
459721.04 3778810.44 0.00586m (15010924) 459771.04
3778810.44 0.00627m (15010924)
459271.04 3778860.44 0.00549 (13120824) 459321.04
3778860.44 0.00563 (13120824)
459371.04 3778860.44 0.00572 (13120824) 459421.04
3778860.44 0.00592m (11010224)
459471.04 3778860.44 0.00610m (11010224) 459521.04
3778860.44 0.00620m (11010224)
459571.04 3778860.44 0.00621m (11010224) 459621.04
3778860.44 0.00617m (11010224)
459671.04 3778860.44 0.00613 (16012724) 459721.04
3778860.44 0.00631m (15010924)
459771.04 3778860.44 0.00674m (15010924) 459271.04
3778910.44 0.00578 (13120824)
459321.04 3778910.44 0.00599 (13120824) 459371.04
3778910.44 0.00613 (13120824)
459421.04 3778910.44 0.00627m (11010224) 459471.04
3778910.44 0.00651m (11010224)
459521.04 3778910.44 0.00667m (11010224) 459571.04
3778910.44 0.00675m (11010224)
459621.04 3778910.44 0.00674m (11010224) 459671.04
3778910.44 0.00665m (11010224)

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        459721.04   3778910.44        0.00682m (15010924)                459771.04
3778910.44        0.00727m (15010924)
        459271.04   3778960.44        0.00613  (13120824)                459321.04
3778960.44        0.00640  (13120824)
        459371.04   3778960.44        0.00661  (13120824)                459421.04
3778960.44        0.00675  (13120824)
        459471.04   3778960.44        0.00699m (11010224)                459521.04
3778960.44        0.00722m (11010224)
        459571.04   3778960.44        0.00736m (11010224)                459621.04
3778960.44        0.00740m (11010224)
        459671.04   3778960.44        0.00734m (11010224)                459721.04
3778960.44        0.00741m (15010924)
        459771.04   3778960.44        0.00788m (15010924)                459271.04
3779010.44        0.00643  (13120824)
        459321.04   3779010.44        0.00678  (13120824)                459371.04
3779010.44        0.00707  (13120824)
        459421.04   3779010.44        0.00730  (13120824)                459471.04
3779010.44        0.00749m (11010224)
        459521.04   3779010.44        0.00781m (11010224)                459571.04
3779010.44        0.00801m (11010224)
        459621.04   3779010.44        0.00813m (11010224)                459671.04
3779010.44        0.00812m (11010224)
        459721.04   3779010.44        0.00808m (15010924)                459771.04
3779010.44        0.00859m (15010924)
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                             *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     L0008261    , L0008262
, L0008263    , L0008264    , L0008265    ,
                 L0008266    , L0008267    , L0008268    , L0008269    , L0008270
, L0008271    , L0008272    , L0008273    ,
                 L0008274    , L0008275    , L0008276    , L0008277    , L0008278
, L0008279    , L0008280    , L0008281    ,
                 L0008282    , L0008283    , L0008284    , L0008285    , L0008286
, L0008287    , L0008288    ,  . . .      ,

                                          *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
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X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459271.04	3779060.44	0.00672	(13120824)	459321.04	3779060.44	0.00716	(13120824)
459371.04	3779060.44	0.00755	(13120824)	459421.04	3779060.44	0.00788	(13120824)
459471.04	3779060.44	0.00810	(13120824)	459521.04	3779060.44	0.00842m	(11010224)
459571.04	3779060.44	0.00873m	(11010224)	459621.04	3779060.44	0.00894m	(11010224)
459671.04	3779060.44	0.00900m	(11010224)	459721.04	3779060.44	0.00892m	(11010224)
459771.04	3779060.44	0.00941m	(15010924)	459271.04	3779110.44	0.00699	(13120824)
459321.04	3779110.44	0.00753	(13120824)	459371.04	3779110.44	0.00804	(13120824)
459421.04	3779110.44	0.00847	(13120824)	459471.04	3779110.44	0.00882	(13120824)
459521.04	3779110.44	0.00908m	(11010224)	459571.04	3779110.44	0.00953m	(11010224)
459621.04	3779110.44	0.00985m	(11010224)	459671.04	3779110.44	0.01000m	(11010224)
459721.04	3779110.44	0.00999m	(11010224)	459771.04	3779110.44	0.01037m	(15010924)
459271.04	3779160.44	0.00722	(13120824)	459321.04	3779160.44	0.00788	(13120824)
459371.04	3779160.44	0.00852	(13120824)	459421.04	3779160.44	0.00908	(13120824)
459471.04	3779160.44	0.00957	(13120824)	459521.04	3779160.44	0.00992	(13120824)
459571.04	3779160.44	0.01039m	(11010224)	459621.04	3779160.44	0.01086m	(11010224)
459671.04	3779160.44	0.01114m	(11010224)	459721.04	3779160.44	0.01124m	(11010224)
459771.04	3779160.44	0.01149m	(15010924)	459271.04	3779210.44	0.00744	(13120824)
459321.04	3779210.44	0.00820	(13120824)	459371.04	3779210.44	0.00898	(13120824)
459421.04	3779210.44	0.00970	(13120824)	459471.04	3779210.44	0.01036	(13120824)
459521.04	3779210.44	0.01090	(13120824)	459571.04	3779210.44	0.01132m	(11010224)
459621.04	3779210.44	0.01197m	(11010224)	459671.04	3779210.44	0.01246m	(11010224)
459721.04	3779210.44	0.01271m	(11010224)	459771.04			

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3779210.44        0.01284m (15010924)
        459271.04   3779260.44        0.00768  (11110924)               459321.04
3779260.44        0.00849  (13120824)
        459371.04   3779260.44        0.00941  (13120824)               459421.04
3779260.44        0.01030  (13120824)
        459471.04   3779260.44        0.01116  (13120824)               459521.04
3779260.44        0.01195  (13120824)
        459571.04   3779260.44        0.01251  (13120824)               459621.04
3779260.44        0.01323m (11010224)
        459671.04   3779260.44        0.01399m (11010224)               459721.04
3779260.44        0.01441m (11010224)
        459771.04   3779260.44        0.01457m (11010224)               459271.04
3779310.44        0.00811m (15010924)
        459321.04   3779310.44        0.00878  (11110924)               459371.04
3779310.44        0.00980  (13120824)
        459421.04   3779310.44        0.01088  (13120824)               459471.04
3779310.44        0.01198  (13120824)
        459521.04   3779310.44        0.01304  (13120824)               459571.04
3779310.44        0.01388  (13120824)
        459621.04   3779310.44        0.01462m (11010224)               459671.04
3779310.44        0.01574m (11010224)
        459721.04   3779310.44        0.01645m (11010224)               459771.04
3779310.44        0.01682m (11010224)
        459271.04   3779360.44        0.00881  (11010324)               459321.04
3779360.44        0.00934m (15010924)
        459371.04   3779360.44        0.01014  (13120824)               459421.04
3779360.44        0.01142  (13120824)
        459471.04   3779360.44        0.01278  (13120824)               459521.04
3779360.44        0.01415  (13120824)
        459571.04   3779360.44        0.01537  (13120824)               459621.04
3779360.44        0.01640  (13120824)
        459671.04   3779360.44        0.01774m (11010224)               459721.04
3779360.44        0.01890m (11010224)
        459771.04   3779360.44        0.01956m (11010224)               459271.04
3779410.44        0.00957  (11010324)
        459321.04   3779410.44        0.01024  (11010324)               459371.04
3779410.44        0.01092  (11010324)
```


*** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0008261   , L0008262

, L0008263 , L0008264 , L0008265 ,
L0008266 , L0008267 , L0008268 , L0008269 , L0008270
, L0008271 , L0008272 , L0008273 ,
L0008274 , L0008275 , L0008276 , L0008277 , L0008278
, L0008279 , L0008280 , L0008281 ,
L0008282 , L0008283 , L0008284 , L0008285 , L0008286
, L0008287 , L0008288 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
459421.04	3779410.44	0.01192m	(15010924)	459471.04	3779410.44	0.01356	(13120824)
459521.04	3779410.44	0.01528	(13120824)	459571.04	3779410.44	0.01700	(13120824)
459621.04	3779410.44	0.01852	(13120824)	459671.04	3779410.44	0.02006m	(11010224)
459721.04	3779410.44	0.02181m	(11010224)	459771.04	3779410.44	0.02297m	(11010224)
459271.04	3779460.44	0.01025	(11010324)	459321.04	3779460.44	0.01114	(11010324)
459371.04	3779460.44	0.01208	(11010324)	459421.04	3779460.44	0.01298	(11010324)
459471.04	3779460.44	0.01431m	(15010924)	459521.04	3779460.44	0.01638	(13120824)
459571.04	3779460.44	0.01867	(13120824)	459621.04	3779460.44	0.02086	(13120824)
459671.04	3779460.44	0.02293	(13120824)	459721.04	3779460.44	0.02534m	(11010224)
459771.04	3779460.44	0.02729m	(11010224)	459271.04	3779510.44	0.01079	(11010324)
459321.04	3779510.44	0.01191	(11010324)	459371.04	3779510.44	0.01313	(11010324)
459421.04	3779510.44	0.01441	(11010324)	459471.04	3779510.44	0.01577	(11010324)
459521.04	3779510.44	0.01753m	(15010924)	459571.04	3779510.44	0.02034	(13120824)
459621.04	3779510.44	0.02341	(13120824)	459671.04	3779510.44	0.02648	(13120824)
459721.04	3779510.44	0.02964m	(11010224)	459771.04	3779510.44	0.03286m	(11010224)

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        459271.04   3779560.44        0.01114  (11010324)               459321.04
3779560.44        0.01247  (11010324)
        459371.04   3779560.44        0.01399  (11010324)               459421.04
3779560.44        0.01567  (11010324)
        459471.04   3779560.44        0.01755  (11010324)               459521.04
3779560.44        0.01954  (11010324)
        459571.04   3779560.44        0.02218m (15010924)               459621.04
3779560.44        0.02606  (13120824)
        459671.04   3779560.44        0.03055  (13120824)               459721.04
3779560.44        0.03498m (11010224)
        459771.04   3779560.44        0.04021m (11010224)               459271.04
3779610.44        0.01135m (15010924)
        459321.04   3779610.44        0.01278  (11010324)               459371.04
3779610.44        0.01455  (11010324)
        459421.04   3779610.44        0.01662  (11010324)               459471.04
3779610.44        0.01903  (11010324)
        459521.04   3779610.44        0.02182  (11010324)               459571.04
3779610.44        0.02501  (11010324)
        459621.04   3779610.44        0.02917m (15010924)               459671.04
3779610.44        0.03501  (13120824)
        459721.04   3779610.44        0.04190  (13120824)               459771.04
3779610.44        0.05010m (11010224)
        459271.04   3779660.44        0.01182m (15010924)               459321.04
3779660.44        0.01330m (15010924)
        459371.04   3779660.44        0.01508m (15010924)               459421.04
3779660.44        0.01726m (15010924)
        459471.04   3779660.44        0.02003  (11010324)               459521.04
3779660.44        0.02360  (11010324)
        459571.04   3779660.44        0.02795  (11010324)               459621.04
3779660.44        0.03331m (15010924)
        459671.04   3779660.44        0.04069m (15010924)               459721.04
3779660.44        0.05039m (15010924)
        459771.04   3779660.44        0.06385m (11010224)               459271.04
3779710.44        0.01222m (15010924)
        459321.04   3779710.44        0.01382m (15010924)               459371.04
3779710.44        0.01578m (15010924)
        459421.04   3779710.44        0.01820m (15010924)               459471.04
3779710.44        0.02127m (15010924)
        459521.04   3779710.44        0.02524m (15010924)               459571.04
3779710.44        0.03048m (15010924)
        459621.04   3779710.44        0.03762m (15010924)               459671.04
3779710.44        0.04766m (15010924)
        459721.04   3779710.44        0.06224m (15010924)               459771.04
3779710.44        0.08433m (15010924)
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Fontana_Sierra Casa
Grande\Fontana_Sierra Casa  ***        03/19/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        16:11:17
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS
AVERAGED OVER   5 YEARS ***

** CONC OF PM_10   IN MICROGRAMS/M**3
**

GROUP ID	NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.05578 AT (460204.12, 3779934.84, 536.26, 536.26, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.05570 AT (460204.12, 3779884.84, 534.42, 534.42, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05194 AT (460204.12, 3779984.84, 537.39, 537.39, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.05121 AT (460204.12, 3779834.84, 533.15, 533.15, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.04886 AT (459771.04, 3779710.44, 530.64, 530.64, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.04500 AT (460204.12, 3780034.84, 539.03, 539.03, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.04332 AT (460204.12, 3779784.84, 531.39, 531.39, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.03979 AT (460254.12, 3779934.84, 535.92, 535.92, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.03899 AT (460254.12, 3779884.84, 533.81, 533.81, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.03800 AT (460254.12, 3779984.84, 536.79, 536.79, 0.00)	DC	

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.28562	ON 11092608: AT (459771.04, 3779710.44, 530.64, 530.64, 0.00)	DC	

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE	GRID-ID

ALL   HIGH   1ST HIGH VALUE IS   0.09657 ON 16051524: AT (460204.12,
3779884.84,   534.42,   534.42,   0.00) DC

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of   0 Fatal Error Message(s)
 A Total of   7 Warning Message(s)
 A Total of   838 Informational Message(s)

 A Total of   43848 Hours Were Processed

 A Total of   40 Calm Hours Identified

 A Total of   798 Missing Hours Identified (1.82 Percent)

    ******** FATAL ERROR MESSAGES ********
               *** NONE ***

    ********   WARNING MESSAGES   ********
 ME W186   1096   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187   1096   MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 MX W438   8800   METQA: Convective Velocity Data Out-of-Range. KURDAT =
 12010216
 MX W438   11536   METQA: Convective Velocity Data Out-of-Range. KURDAT =
 12042516
 MX W420   16779   METQA: Wind Speed Out-of-Range.   KURDAT =
 12113003
 MX W450   26305   CHKDAT: Record Out of Sequence in Meteorological File at:
 15010101

 MX W450   26305   CHKDAT: Record Out of Sequence in Meteorological File at:
1 year gap

    ****
    *** AERMOD Finishes Successfully ***
    ****

Kimley»Horn

MEMORANDUM

To:	Kari Cano
From:	Ryan Chiene
	Kimley-Horn and Associates, Inc.
Date:	June 2, 2020
Subject:	Palmetto Replacement Site: Proposed Sierra Casa Grande Warehouse Residential Replacement Site - Health Risk Assessment

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Purpose

The purpose of this Health Risk Assessment (HRA) is to evaluate potential health risks associated with Toxic Air Contaminants (TAC) including Diesel Particulate Matter (DPM) resulting from the implementation of the proposed residential replacement site located on the northeast corner of Palmetto Avenue and Valencia Avenue (Palmetto Replacement Site) in the City of Fontana. This HRA was prepared in accordance with the requirements of the South Coast Air Quality Management District (SCAQMD) requirements, and pursuant to Office of Environmental Health Hazard Assessment (OEHHA) guidelines, this HRA was prepared to determine if Project implementation is likely to result in health risks. Specifically, this analysis addresses the air quality impacts referenced in State CEQA Guidelines Section 15332(d).

Project Description

The project is proposing residential replacement sites for the development of residential dwelling units at two project sites within the City of Fontana in efforts to account for the potential residential dwelling units lost with the development of the proposed Sierra Avenue at Casa Grande Drive Warehouse. The two replacement sites are proposed within the City of Fontana and are shown on Exhibit 1. One replacement site is located on the northeast corner of the intersection of Palmetto Avenue at Valencia Avenue. The site is currently 3.58 acres and occupied by 8 existing residential dwelling units and a church building. The other replacement site, located on the northwest corner of the intersection of Mango Avenue at Malaga Street (Mango Replacement site), is mentioned in this memorandum yet analyzed in a separate document.

The replacement of residential land uses due to the development of the Sierra Avenue at Casa Grande Drive Warehouse would result in the development of a maximum of 219 new residential dwelling units, in addition to the existing units on each site. The 219 dwelling units would be split proportionally between the two replacement sites as follows:

- **Palmetto Avenue/Arrow Boulevard Site**: 24 new dwelling units
    - 8 existing dwelling units
    - 32 onsite total dwelling units
    - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

- **Malaga Street/Mango Avenue Site**: 195 new dwelling units
    - 14 existing dwelling units
    - 209 onsite total dwelling units
    - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

Environmental Setting

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project site lies within the central portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

Climate

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin. These factors along with applicable regulations are discussed below.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Meteorology

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus

clouds, occasionally referred to as “high fog,” are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

A temperature inversion is defined as an increase in temperature with height, or to the layer within which such an increase occurs. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the Project is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Hazardous Air Pollutants (HAP) is a term used by the Federal Clean Air Act (FCAA) that includes a variety of pollutants generated or emitted by industrial production activities. Identified as TACs under the California Clean Air Act (CCAA), have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. The California Air Resources Board (CARB) provides emission inventories for only the larger air basins.

Industrial facilities and mobile sources are significant sources of TACs. In addition to industrial sources, various common urban facilities also produce TAC emissions, such as gasoline stations (benzene), hospitals (ethylene oxide), and dry cleaners (perchloroethylene). Automobile exhaust also contains

TACs such as benzene and 1,3-butadiene. Diesel particulate matter (DPM) was identified as a TAC by CARB in 1998. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. BAAQMD research indicates that mobile-source emissions of DPM, benzene, and 1,3-butadiene represent a substantial portion of the ambient background risk from TACs in the SFBAAB.

TACs do not have ambient air quality standards because no safe levels of TACs can be determined. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) apply to facilities that use, produce, or emit toxic chemicals. Facilities subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Toxic contaminants often result from fugitive emissions during fuel storage and transfer activities, and from leaking valves and pipes. For example, the electronics industry, including semiconductor manufacturing, uses highly toxic chlorinated solvents in semiconductor production processes. Sources of air toxics go beyond industry, however. Automobile exhaust also contains toxic air pollutants such as benzene and 1,3-butadiene.

In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total DPM emissions, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total DPM. CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan (DRRP), the Statewide Portable Equipment Registration Program (PERP), and the Diesel Off-Road Reporting System (DOORS). The PERP and DOORS programs allow owners or operators of portable engines and certain other types of equipment to register their units to operate their equipment throughout California without having to obtain individual permits from local air districts.

As stated above, diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by the OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. California has identified diesel exhaust particles as a carcinogen.

Regulatory Setting

Federal

Federal Clean Air Act

The Federal Clean Air Act (FCAA) was amended in 1990 to address a large number of air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The FCAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the U.S. Environmental Protection Agency (EPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and DPM. More recently, the EPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the FCAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The FCAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

State of California

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Diesel Risk Reduction Plan. The identification of DPM as a TAC in 1998 led CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan) in October 2000. The Risk Reduction Plan's goals include an 85 percent reduction in DPM by 2020 from the 2000 baseline.[1] The Risk Reduction Plan includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles. On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_X) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses would need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter

[1] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program. The purpose of the CARB Air Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to diesel particulate matter and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles. The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, beginning in 2008, would require that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

South Coast Air Quality Management District

The California Clean Air Act (CCAA) provides the South Coast Air Quality Management District (SCAQMD) with the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example of this would be the motor vehicles at an intersection, a mall, and on highways. As a State agency, CARB regulates motor vehicles and fuels for their emissions.

The Air Toxics Control Plan (March 2000, revised March 26, 2004) is a planning document designed to examine the overall direction of the SCAQMD's air toxics control program. It includes development and implementation of strategic initiatives to monitor and control air toxics emissions. Control strategies that are deemed viable and are within the SCAQMD's jurisdiction will each be brought to the SCAQMD Board for further consideration through the normal public review process. Strategies that are to be implemented by other agencies will be developed in a cooperative effort, and the progress will be reported back to the Board periodically.

The SCAQMD has conducted an in-depth analysis of the toxic air contaminants and their resulting health risks for all of Southern California. This study, the Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES IV," shows that cancer risk has decreased more than 50 percent between MATES III (2008) and MATES IV (2015).

MATES IV is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the South Coast Air Basin emissions. Therefore, MATES IV study represents the baseline health risk for a cumulative analysis. MATES IV estimates the average excess cancer risk level from exposure to TACs is less than 400 in one million basin-wide. These model estimates were based

on monitoring data collected at ten fixed sites within the South Coast Air Basin. None of the fixed monitoring sites are within the local area of the Project site. However, MATES IV has extrapolated the excess cancer risk levels throughout the basin by modeling the specific grids. MATES IV modeling predicted an excess cancer risk of 427 in one million for the Project area. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68 percent of the total risk shown in MATES IV. The SCAQMD is currently preparing MATES V, which will be the latest comprehensive study of levels of toxic air pollutants the region. MATES V will include an advanced monitoring component with a focus on refinery emissions.

Significance Criteria and Methodology

Health Risk Analysis Thresholds

Project health risks are determined by examining the types and levels of air toxics generated and the associated impacts on factors that affect air quality. While the final determination of significance thresholds is within the purview of the lead agency pursuant to the State CEQA Guidelines, the SCAQMD recommends that the following air pollution thresholds be used by lead agencies in determining whether the proposed Project is significant. If the lead agency finds that the proposed Project has the potential to exceed the air pollution thresholds, the Project should be considered significant. The thresholds for air toxic emissions are as follows.

- Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.

- Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of 1 in one million.

Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to DPM exposure. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. The 10 in one million standard is a health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons, out of one million equally exposed people would contract cancer if exposed to toxic air contaminants over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million which is 100 times more than the SCAQMD's threshold of 10 in one million.

The SCAQMD has also established non-carcinogenic risk parameters for use in health risk assessments (HRAs). Noncarcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

Methodology

The air dispersion modeling for the HRA was performed using the EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in the Project's case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. The SCAQMD provides surface and upper air meteorological data. Surface and upper air meteorological data from the Pico Rivera Meteorological Station was selected as being the most representative for meteorology based on proximity to the Project site.

The Project is located approximately 785 feet north of the Metrolink San Bernardino line railway. According to Metrolink's *Q3 '18-19 Fact Sheet*,[2] 38 Metrolink trains pass through the City of Fontana each day on this rail line. As such, locomotive diesel engine emissions during Metrolink pass-bys could result in pollutant concentrations at the Project site. Train emissions along the Metrolink rail line were calculated using line-haul emissions factors from the U.S. EPA *Emissions Factors for Locomotives*[3] report and daily train information from Metrolink's *Q3 '18-19 Fact Sheet*. A DPM emission rate for PM_{10} (particulate matter 10 microns in diameter or less) was calculated using data obtained from these sources; refer to Appendix A.

The model's emissions are from line volume sources (comprised of smaller adjacent volume sources) along the Metrolink San Bernardino line railway. Locomotive train emissions were assigned a release height of 15 feet (4.5 meters), which is consistent with previous analyses completed under the jurisdiction of the SCAQMD. Locomotive emissions were also assigned a plume height of 20 feet (6.2 meters), which is based on EPA guidance for vehicle volume sources.

AERMOD was run to obtain the peak 1-hour and annual average concentration in micrograms per cubic meter ($\mu g/m^3$) of PM_{10} at the proposed Project's future sensitive receptors (i.e., residents). According to the SCAQMD's Supplemental Guidelines for Preparing Risk Assessments for AB 2588, air dispersion modeling is required to estimate annual average concentrations to calculate the Maximum Individual Cancer Risk (MICR), the maximum chronic HI, the impact zones, and excess cancer burden, as well as peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, a receptor grid was placed over the Project site to cover the impact zone. According to the SCAQMD, in order "to identify the maximum impacted receptors (i.e. peak cancer risk and peak hazard indices) a grid spacing of 100 meters or less must be used" (SCAQMD's Supplemental Guidelines page 16). Given the Project site's size, on-site receptors were conservatively modeled with a 15-meter grid spacing. In addition, National Elevation Dataset (NED)

[2] Metrolink, *Q3 '18-19 Fact Sheet*, https://metrolinktrains.com/globalassets/about/agency/facts-and-numbers/quarterly-fact-sheet-q3-fact-sheet-2018-2019.pdf, accessed May 11, 2020.
[3] U.S. EPA, *Emission Factors for Locomotives*, April 2009.

terrain data was imported into AERMOD for the Project. The modeling and analysis was prepared in accordance with the SCAQMD Modeling Guidance for AERMOD.[4]

Note that the concentration estimate developed using this methodology is conservative and is not a specific prediction of the actual concentrations that would occur at the Project site any one point in time. Actual 1-hour and annual average concentrations are dependent on many variables, particularly the number and type of vehicles and equipment operating at specific distances during time periods of adverse meteorology. A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on these worst-case exposure duration scenarios. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case location of the Project was assessed.

Potential Health Risk Impacts

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel exhaust is composed of two phases, either gas or particulate – both contribute to the risk. The gas phase is composed of many of the urban TACs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines.

Carcinogenic Risk

DPM emissions from train Metrolink locomotives were estimated using line-haul emission factors for PM_{10} from the U.S. EPA *Emissions Factors for Locomotives* report, and information derived from the Metrolink *Q3 '18-19 Fact Sheet* for San Bernardino line railway operations.

The U.S. EPA has established emission standards for oxides of nitrogen (NOx), hydrocarbons (HC), carbon monoxide (CO), particulate matter (PM) and smoke for newly manufactured and remanufactured locomotives. These standards, which are codified at 40 CFR part 1033, include several sets of emission standards with applicability dependent on the date a locomotive is first manufactured. The first set of standards (Tier 0) applies to most locomotives originally manufactured before 2001. The most stringent set of standards (Tier 4) applies to locomotives originally manufactured in 2015 and later. For this Project, annual average PM_{10} emission factors were

[4] South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance, October 2019.

calculated based on the speed, horsepower, travel length and time, number of train pass-bys (38 daily), and a line-haul emissions factor of 0.02 g/bhp-hr for Tier 4 locomotive engines.[5]

Based on the AERMOD outputs, the highest expected hourly average diesel PM_{10} emission concentrations from Metrolink train pass-bys along the San Bernardino railway line near sensitive receptors would be 0.026 µg/m^3. The highest expected annual average diesel PM_{10} emission concentrations near sensitive receptors would be 0.0095 µg/m^3. The calculations conservatively assume no cleaner technology with lower emissions in future years. As shown in **Table 1: Risk Assessment Results**, the highest calculated carcinogenic risk resulting from the Project is 8.25 per million residents. As shown, impacts related to cancer risk would be less than significant at on-site residential uses.

Table 1: Risk Assessment Results

Exposure Scenario	Maximum Cancer Risk (Risk per Million)[1, 2]	Significance Threshold (Risk per Million)	Exceeds Significance Threshold?
Residents	8.25	10	No

1. Refer to Appendix A.
2. The maximum cancer risk would be experienced at the southeastern corner of the Palmetto Replacement site based on worst-case exposure durations for the Project, 95th percentile breathing rates, and 30-year averaging time.

Non-Carcinogenic Hazards

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index associated with both DPM and acrolein emissions from the Project would be 0.002 and 0.01, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur.

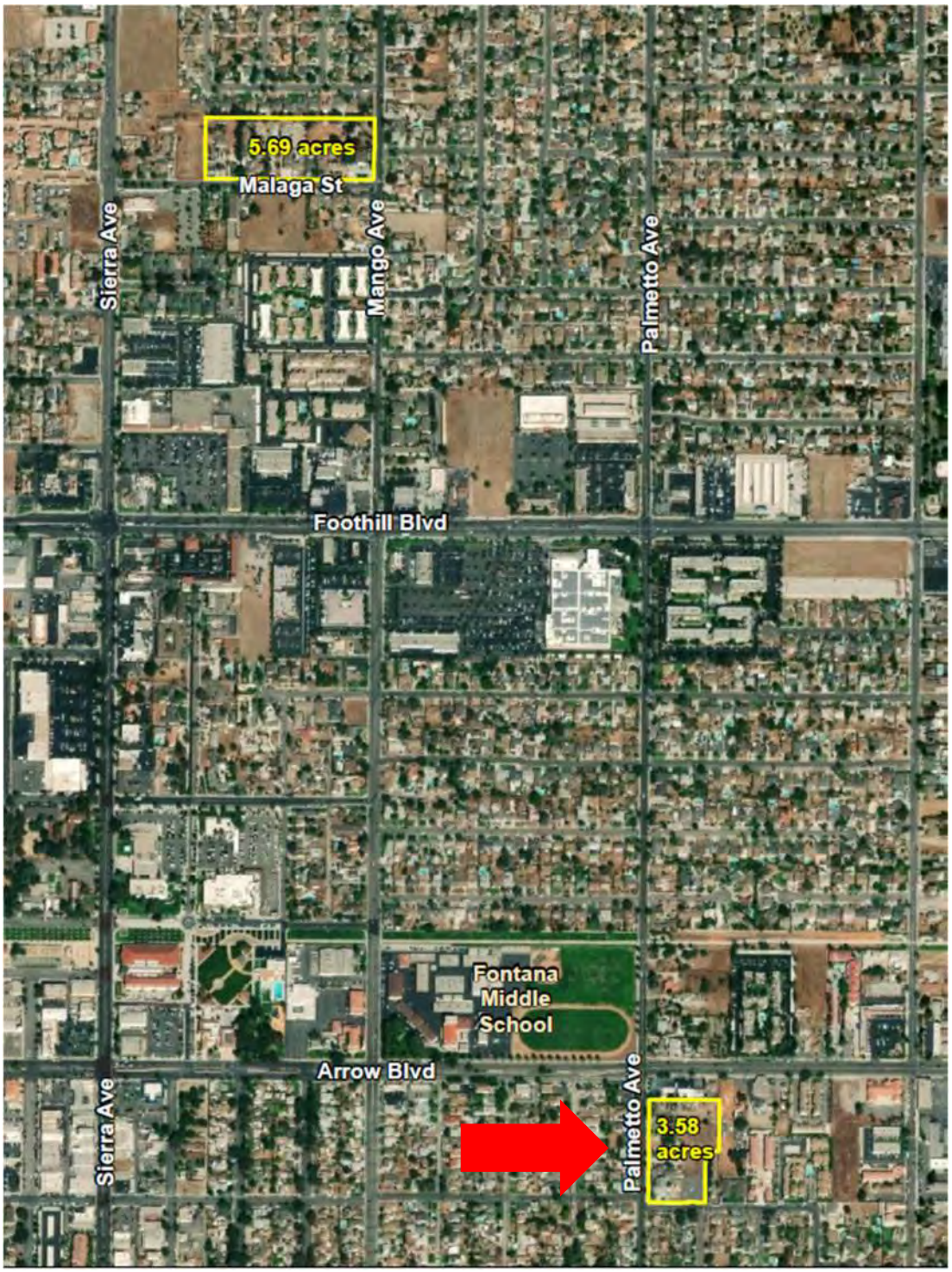
[5] Metrolink upgraded its locomotive fleet to Tier 4 engines in 2018: https://metrolinktrains.com/news/metrolink-news/metrolinks-new-tier-4-clean-locomotives-in-service-today/.

Conclusion

As described above, impacts related to cancer risk would be less than significant. Additionally, non-carcinogenic hazards are calculated to be within acceptable limits. It should be noted that the impacts assess the Project's incremental contribution to health risk impacts, consistent with the SCAQMD guidance and methodology. Therefore, impacts related to health risk from the Project would be less than significant.

Kimley»Horn

Exhibit 1 - Project Location



Appendix A

Modeling Data

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.8.3
** Lakes Environmental Software Inc.
** Date: 5/8/2020
** File: C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement
Site.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement
   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Palmetto Replacement Site.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Metrolink RR
** PREFIX
** Length of Side = 2.00
** Configuration = Adjacent
** Emission Rate = 0.0034
** Vertical Dimension = 10.50
** SZINIT = 4.88
** Nodes = 2
** 458987.858, 3772770.394, 379.19, 4.50, 0.93
```

```
** 463597.734, 3772900.815, 376.17, 4.50, 0.93
** ----------------------------------------------------------------
   LOCATION L0000001     VOLUME   458988.858 3772770.422 379.33
   LOCATION L0000002     VOLUME   458990.857 3772770.479 379.32
   LOCATION L0000003     VOLUME   458992.856 3772770.535 379.32
   LOCATION L0000004     VOLUME   458994.855 3772770.592 379.32
   LOCATION L0000005     VOLUME   458996.855 3772770.648 379.31
   LOCATION L0000006     VOLUME   458998.854 3772770.705 379.31
   LOCATION L0000007     VOLUME   459000.853 3772770.762 379.31
   LOCATION L0000008     VOLUME   459002.852 3772770.818 379.30
   LOCATION L0000009     VOLUME   459004.851 3772770.875 379.30
   LOCATION L0000010     VOLUME   459006.851 3772770.931 379.30
   LOCATION L0000011     VOLUME   459008.850 3772770.988 379.29
   LOCATION L0000012     VOLUME   459010.849 3772771.044 379.29
   LOCATION L0000013     VOLUME   459012.848 3772771.101 379.29
   LOCATION L0000014     VOLUME   459014.847 3772771.157 379.28
   LOCATION L0000015     VOLUME   459016.847 3772771.214 379.29
   LOCATION L0000016     VOLUME   459018.846 3772771.271 379.29
   LOCATION L0000017     VOLUME   459020.845 3772771.327 379.29
   LOCATION L0000018     VOLUME   459022.844 3772771.384 379.29
   LOCATION L0000019     VOLUME   459024.843 3772771.440 379.29
   LOCATION L0000020     VOLUME   459026.843 3772771.497 379.30
   LOCATION L0000021     VOLUME   459028.842 3772771.553 379.30
   LOCATION L0000022     VOLUME   459030.841 3772771.610 379.30
   LOCATION L0000023     VOLUME   459032.840 3772771.666 379.30
   LOCATION L0000024     VOLUME   459034.839 3772771.723 379.30
   LOCATION L0000025     VOLUME   459036.839 3772771.780 379.31
   LOCATION L0000026     VOLUME   459038.838 3772771.836 379.31
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   LOCATION L0000028     VOLUME   459042.836 3772771.949 379.32
   LOCATION L0000029     VOLUME   459044.835 3772772.006 379.33
   LOCATION L0000030     VOLUME   459046.835 3772772.062 379.34
   LOCATION L0000031     VOLUME   459048.834 3772772.119 379.35
   LOCATION L0000032     VOLUME   459050.833 3772772.176 379.35
   LOCATION L0000033     VOLUME   459052.832 3772772.232 379.36
   LOCATION L0000034     VOLUME   459054.831 3772772.289 379.37
   LOCATION L0000035     VOLUME   459056.831 3772772.345 379.38
   LOCATION L0000036     VOLUME   459058.830 3772772.402 379.39
   LOCATION L0000037     VOLUME   459060.829 3772772.458 379.40
   LOCATION L0000038     VOLUME   459062.828 3772772.515 379.41
   LOCATION L0000039     VOLUME   459064.827 3772772.571 379.41
   LOCATION L0000040     VOLUME   459066.827 3772772.628 379.42
   LOCATION L0000041     VOLUME   459068.826 3772772.685 379.44
   LOCATION L0000042     VOLUME   459070.825 3772772.741 379.45
   LOCATION L0000043     VOLUME   459072.824 3772772.798 379.46
   LOCATION L0000044     VOLUME   459074.823 3772772.854 379.48
   LOCATION L0000045     VOLUME   459076.823 3772772.911 379.49
   LOCATION L0000046     VOLUME   459078.822 3772772.967 379.50
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LOCATION	L0000050	VOLUME	459086.819	3772773.194	379.55
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LOCATION	L0000054	VOLUME	459094.815	3772773.420	379.61
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LOCATION	L0000060	VOLUME	459106.811	3772773.759	379.70
LOCATION	L0000061	VOLUME	459108.810	3772773.816	379.72
LOCATION	L0000062	VOLUME	459110.809	3772773.872	379.73
LOCATION	L0000063	VOLUME	459112.808	3772773.929	379.75
LOCATION	L0000064	VOLUME	459114.807	3772773.985	379.76
LOCATION	L0000065	VOLUME	459116.807	3772774.042	379.78
LOCATION	L0000066	VOLUME	459118.806	3772774.099	379.79
LOCATION	L0000067	VOLUME	459120.805	3772774.155	379.80
LOCATION	L0000068	VOLUME	459122.804	3772774.212	379.80
LOCATION	L0000069	VOLUME	459124.803	3772774.268	379.81
LOCATION	L0000070	VOLUME	459126.803	3772774.325	379.82
LOCATION	L0000071	VOLUME	459128.802	3772774.381	379.82
LOCATION	L0000072	VOLUME	459130.801	3772774.438	379.83
LOCATION	L0000073	VOLUME	459132.800	3772774.495	379.84
LOCATION	L0000074	VOLUME	459134.799	3772774.551	379.84
LOCATION	L0000075	VOLUME	459136.799	3772774.608	379.85
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LOCATION	L0000079	VOLUME	459144.795	3772774.834	379.87
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LOCATION	L0000081	VOLUME	459148.794	3772774.947	379.88
LOCATION	L0000082	VOLUME	459150.793	3772775.004	379.89
LOCATION	L0000083	VOLUME	459152.792	3772775.060	379.89
LOCATION	L0000084	VOLUME	459154.791	3772775.117	379.90
LOCATION	L0000085	VOLUME	459156.791	3772775.173	379.90
LOCATION	L0000086	VOLUME	459158.790	3772775.230	379.91
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LOCATION	L0000088	VOLUME	459162.788	3772775.343	379.92
LOCATION	L0000089	VOLUME	459164.787	3772775.399	379.92
LOCATION	L0000090	VOLUME	459166.787	3772775.456	379.93
LOCATION	L0000091	VOLUME	459168.786	3772775.513	379.93
LOCATION	L0000092	VOLUME	459170.785	3772775.569	379.95
LOCATION	L0000093	VOLUME	459172.784	3772775.626	379.96
LOCATION	L0000094	VOLUME	459174.783	3772775.682	379.98

LOCATION	L0000095	VOLUME	459176.783	3772775.739	380.00
LOCATION	L0000096	VOLUME	459178.782	3772775.795	380.02
LOCATION	L0000097	VOLUME	459180.781	3772775.852	380.03
LOCATION	L0000098	VOLUME	459182.780	3772775.909	380.05
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LOCATION	L0000105	VOLUME	459196.775	3772776.304	380.18
LOCATION	L0000106	VOLUME	459198.774	3772776.361	380.21
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LOCATION	L0000108	VOLUME	459202.772	3772776.474	380.26
LOCATION	L0000109	VOLUME	459204.771	3772776.531	380.29
LOCATION	L0000110	VOLUME	459206.771	3772776.587	380.32
LOCATION	L0000111	VOLUME	459208.770	3772776.644	380.35
LOCATION	L0000112	VOLUME	459210.769	3772776.700	380.37
LOCATION	L0000113	VOLUME	459212.768	3772776.757	380.40
LOCATION	L0000114	VOLUME	459214.767	3772776.814	380.43
LOCATION	L0000115	VOLUME	459216.767	3772776.870	380.46
LOCATION	L0000116	VOLUME	459218.766	3772776.927	380.49
LOCATION	L0000117	VOLUME	459220.765	3772776.983	380.51
LOCATION	L0000118	VOLUME	459222.764	3772777.040	380.53
LOCATION	L0000119	VOLUME	459224.763	3772777.096	380.55
LOCATION	L0000120	VOLUME	459226.763	3772777.153	380.57
LOCATION	L0000121	VOLUME	459228.762	3772777.209	380.59
LOCATION	L0000122	VOLUME	459230.761	3772777.266	380.61
LOCATION	L0000123	VOLUME	459232.760	3772777.323	380.63
LOCATION	L0000124	VOLUME	459234.759	3772777.379	380.65
LOCATION	L0000125	VOLUME	459236.759	3772777.436	380.67
LOCATION	L0000126	VOLUME	459238.758	3772777.492	380.69
LOCATION	L0000127	VOLUME	459240.757	3772777.549	380.71
LOCATION	L0000128	VOLUME	459242.756	3772777.605	380.73
LOCATION	L0000129	VOLUME	459244.755	3772777.662	380.75
LOCATION	L0000130	VOLUME	459246.755	3772777.718	380.76
LOCATION	L0000131	VOLUME	459248.754	3772777.775	380.76
LOCATION	L0000132	VOLUME	459250.753	3772777.832	380.77
LOCATION	L0000133	VOLUME	459252.752	3772777.888	380.77
LOCATION	L0000134	VOLUME	459254.751	3772777.945	380.78
LOCATION	L0000135	VOLUME	459256.751	3772778.001	380.78
LOCATION	L0000136	VOLUME	459258.750	3772778.058	380.79
LOCATION	L0000137	VOLUME	459260.749	3772778.114	380.79
LOCATION	L0000138	VOLUME	459262.748	3772778.171	380.80
LOCATION	L0000139	VOLUME	459264.747	3772778.228	380.80
LOCATION	L0000140	VOLUME	459266.747	3772778.284	380.80
LOCATION	L0000141	VOLUME	459268.746	3772778.341	380.81
LOCATION	L0000142	VOLUME	459270.745	3772778.397	380.81

LOCATION	L0000143	VOLUME	459272.744	3772778.454	380.81
LOCATION	L0000144	VOLUME	459274.743	3772778.510	380.80
LOCATION	L0000145	VOLUME	459276.743	3772778.567	380.79
LOCATION	L0000146	VOLUME	459278.742	3772778.623	380.79
LOCATION	L0000147	VOLUME	459280.741	3772778.680	380.78
LOCATION	L0000148	VOLUME	459282.740	3772778.737	380.77
LOCATION	L0000149	VOLUME	459284.739	3772778.793	380.76
LOCATION	L0000150	VOLUME	459286.739	3772778.850	380.76
LOCATION	L0000151	VOLUME	459288.738	3772778.906	380.75
LOCATION	L0000152	VOLUME	459290.737	3772778.963	380.74
LOCATION	L0000153	VOLUME	459292.736	3772779.019	380.73
LOCATION	L0000154	VOLUME	459294.735	3772779.076	380.73
LOCATION	L0000155	VOLUME	459296.735	3772779.132	380.72
LOCATION	L0000156	VOLUME	459298.734	3772779.189	380.72
LOCATION	L0000157	VOLUME	459300.733	3772779.246	380.73
LOCATION	L0000158	VOLUME	459302.732	3772779.302	380.73
LOCATION	L0000159	VOLUME	459304.731	3772779.359	380.74
LOCATION	L0000160	VOLUME	459306.731	3772779.415	380.75
LOCATION	L0000161	VOLUME	459308.730	3772779.472	380.75
LOCATION	L0000162	VOLUME	459310.729	3772779.528	380.76
LOCATION	L0000163	VOLUME	459312.728	3772779.585	380.76
LOCATION	L0000164	VOLUME	459314.727	3772779.642	380.77
LOCATION	L0000165	VOLUME	459316.727	3772779.698	380.77
LOCATION	L0000166	VOLUME	459318.726	3772779.755	380.78
LOCATION	L0000167	VOLUME	459320.725	3772779.811	380.79
LOCATION	L0000168	VOLUME	459322.724	3772779.868	380.79
LOCATION	L0000169	VOLUME	459324.723	3772779.924	380.80
LOCATION	L0000170	VOLUME	459326.723	3772779.981	380.81
LOCATION	L0000171	VOLUME	459328.722	3772780.037	380.82
LOCATION	L0000172	VOLUME	459330.721	3772780.094	380.84
LOCATION	L0000173	VOLUME	459332.720	3772780.151	380.85
LOCATION	L0000174	VOLUME	459334.719	3772780.207	380.86
LOCATION	L0000175	VOLUME	459336.719	3772780.264	380.87
LOCATION	L0000176	VOLUME	459338.718	3772780.320	380.88
LOCATION	L0000177	VOLUME	459340.717	3772780.377	380.89
LOCATION	L0000178	VOLUME	459342.716	3772780.433	380.90
LOCATION	L0000179	VOLUME	459344.715	3772780.490	380.91
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LOCATION	L0000182	VOLUME	459350.713	3772780.660	380.95
LOCATION	L0000183	VOLUME	459352.712	3772780.716	380.97
LOCATION	L0000184	VOLUME	459354.711	3772780.773	380.98
LOCATION	L0000185	VOLUME	459356.711	3772780.829	381.00
LOCATION	L0000186	VOLUME	459358.710	3772780.886	381.01
LOCATION	L0000187	VOLUME	459360.709	3772780.942	381.03
LOCATION	L0000188	VOLUME	459362.708	3772780.999	381.04
LOCATION	L0000189	VOLUME	459364.707	3772781.056	381.06
LOCATION	L0000190	VOLUME	459366.707	3772781.112	381.07

LOCATION	L0000191	VOLUME	459368.706	3772781.169	381.09
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LOCATION	L0000194	VOLUME	459374.703	3772781.338	381.13
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LOCATION	L0000197	VOLUME	459380.701	3772781.508	381.18
LOCATION	L0000198	VOLUME	459382.700	3772781.565	381.20
LOCATION	L0000199	VOLUME	459384.699	3772781.621	381.22
LOCATION	L0000200	VOLUME	459386.699	3772781.678	381.23
LOCATION	L0000201	VOLUME	459388.698	3772781.734	381.25
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LOCATION	L0000204	VOLUME	459394.695	3772781.904	381.30
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LOCATION	L0000206	VOLUME	459398.694	3772782.017	381.33
LOCATION	L0000207	VOLUME	459400.693	3772782.074	381.34
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LOCATION	L0000215	VOLUME	459416.687	3772782.526	381.43
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LOCATION	L0000217	VOLUME	459420.685	3772782.639	381.45
LOCATION	L0000218	VOLUME	459422.684	3772782.696	381.46
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LOCATION	L0000233	VOLUME	459452.672	3772783.544	381.39
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LOCATION	L0000235	VOLUME	459456.671	3772783.657	381.40
LOCATION	L0000236	VOLUME	459458.670	3772783.714	381.40
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LOCATION	L0000238	VOLUME	459462.668	3772783.827	381.41

LOCATION	L0000239	VOLUME	459464.667	3772783.884	381.41
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LOCATION	L0000281	VOLUME	459548.634	3772786.259	381.64
LOCATION	L0000282	VOLUME	459550.633	3772786.316	381.65
LOCATION	L0000283	VOLUME	459552.632	3772786.372	381.65
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LOCATION	L0000285	VOLUME	459556.631	3772786.485	381.66
LOCATION	L0000286	VOLUME	459558.630	3772786.542	381.67

LOCATION	L0000287	VOLUME	459560.629	3772786.598	381.67
LOCATION	L0000288	VOLUME	459562.628	3772786.655	381.68
LOCATION	L0000289	VOLUME	459564.627	3772786.712	381.68
LOCATION	L0000290	VOLUME	459566.627	3772786.768	381.69
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LOCATION	L0000292	VOLUME	459570.625	3772786.881	381.70
LOCATION	L0000293	VOLUME	459572.624	3772786.938	381.70
LOCATION	L0000294	VOLUME	459574.623	3772786.994	381.71
LOCATION	L0000295	VOLUME	459576.623	3772787.051	381.71
LOCATION	L0000296	VOLUME	459578.622	3772787.108	381.72
LOCATION	L0000297	VOLUME	459580.621	3772787.164	381.72
LOCATION	L0000298	VOLUME	459582.620	3772787.221	381.72
LOCATION	L0000299	VOLUME	459584.619	3772787.277	381.72
LOCATION	L0000300	VOLUME	459586.619	3772787.334	381.72
LOCATION	L0000301	VOLUME	459588.618	3772787.390	381.72
LOCATION	L0000302	VOLUME	459590.617	3772787.447	381.72
LOCATION	L0000303	VOLUME	459592.616	3772787.503	381.72
LOCATION	L0000304	VOLUME	459594.615	3772787.560	381.72
LOCATION	L0000305	VOLUME	459596.615	3772787.617	381.72
LOCATION	L0000306	VOLUME	459598.614	3772787.673	381.73
LOCATION	L0000307	VOLUME	459600.613	3772787.730	381.73
LOCATION	L0000308	VOLUME	459602.612	3772787.786	381.73
LOCATION	L0000309	VOLUME	459604.611	3772787.843	381.73
LOCATION	L0000310	VOLUME	459606.611	3772787.899	381.74
LOCATION	L0000311	VOLUME	459608.610	3772787.956	381.75
LOCATION	L0000312	VOLUME	459610.609	3772788.013	381.75
LOCATION	L0000313	VOLUME	459612.608	3772788.069	381.76
LOCATION	L0000314	VOLUME	459614.607	3772788.126	381.77
LOCATION	L0000315	VOLUME	459616.607	3772788.182	381.77
LOCATION	L0000316	VOLUME	459618.606	3772788.239	381.78
LOCATION	L0000317	VOLUME	459620.605	3772788.295	381.79
LOCATION	L0000318	VOLUME	459622.604	3772788.352	381.80
LOCATION	L0000319	VOLUME	459624.603	3772788.408	381.80
LOCATION	L0000320	VOLUME	459626.603	3772788.465	381.81
LOCATION	L0000321	VOLUME	459628.602	3772788.522	381.82
LOCATION	L0000322	VOLUME	459630.601	3772788.578	381.83
LOCATION	L0000323	VOLUME	459632.600	3772788.635	381.84
LOCATION	L0000324	VOLUME	459634.599	3772788.691	381.85
LOCATION	L0000325	VOLUME	459636.599	3772788.748	381.86
LOCATION	L0000326	VOLUME	459638.598	3772788.804	381.88
LOCATION	L0000327	VOLUME	459640.597	3772788.861	381.89
LOCATION	L0000328	VOLUME	459642.596	3772788.917	381.90
LOCATION	L0000329	VOLUME	459644.595	3772788.974	381.91
LOCATION	L0000330	VOLUME	459646.595	3772789.031	381.92
LOCATION	L0000331	VOLUME	459648.594	3772789.087	381.94
LOCATION	L0000332	VOLUME	459650.593	3772789.144	381.95
LOCATION	L0000333	VOLUME	459652.592	3772789.200	381.96
LOCATION	L0000334	VOLUME	459654.591	3772789.257	381.97

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LOCATION L0000335     VOLUME   459656.591 3772789.313 381.98
LOCATION L0000336     VOLUME   459658.590 3772789.370 381.99
LOCATION L0000337     VOLUME   459660.589 3772789.427 382.00
LOCATION L0000338     VOLUME   459662.588 3772789.483 382.00
LOCATION L0000339     VOLUME   459664.587 3772789.540 382.01
LOCATION L0000340     VOLUME   459666.587 3772789.596 382.02
LOCATION L0000341     VOLUME   459668.586 3772789.653 382.02
LOCATION L0000342     VOLUME   459670.585 3772789.709 382.03
LOCATION L0000343     VOLUME   459672.584 3772789.766 382.04
LOCATION L0000344     VOLUME   459674.583 3772789.822 382.05
LOCATION L0000345     VOLUME   459676.583 3772789.879 382.05
LOCATION L0000346     VOLUME   459678.582 3772789.936 382.06
LOCATION L0000347     VOLUME   459680.581 3772789.992 382.07
LOCATION L0000348     VOLUME   459682.580 3772790.049 382.07
LOCATION L0000349     VOLUME   459684.579 3772790.105 382.07
LOCATION L0000350     VOLUME   459686.579 3772790.162 382.07
LOCATION L0000351     VOLUME   459688.578 3772790.218 382.07
LOCATION L0000352     VOLUME   459690.577 3772790.275 382.07
LOCATION L0000353     VOLUME   459692.576 3772790.332 382.07
LOCATION L0000354     VOLUME   459694.575 3772790.388 382.07
LOCATION L0000355     VOLUME   459696.575 3772790.445 382.07
LOCATION L0000356     VOLUME   459698.574 3772790.501 382.07
LOCATION L0000357     VOLUME   459700.573 3772790.558 382.08
LOCATION L0000358     VOLUME   459702.572 3772790.614 382.08
LOCATION L0000359     VOLUME   459704.571 3772790.671 382.08
LOCATION L0000360     VOLUME   459706.571 3772790.727 382.08
LOCATION L0000361     VOLUME   459708.570 3772790.784 382.07
LOCATION L0000362     VOLUME   459710.569 3772790.841 382.07
LOCATION L0000363     VOLUME   459712.568 3772790.897 382.06
LOCATION L0000364     VOLUME   459714.567 3772790.954 382.06
LOCATION L0000365     VOLUME   459716.567 3772791.010 382.05
LOCATION L0000366     VOLUME   459718.566 3772791.067 382.04
LOCATION L0000367     VOLUME   459720.565 3772791.123 382.04
LOCATION L0000368     VOLUME   459722.564 3772791.180 382.03
LOCATION L0000369     VOLUME   459724.563 3772791.236 382.02
LOCATION L0000370     VOLUME   459726.563 3772791.293 382.02
LOCATION L0000371     VOLUME   459728.562 3772791.350 382.01
LOCATION L0000372     VOLUME   459730.561 3772791.406 382.00
LOCATION L0000373     VOLUME   459732.560 3772791.463 382.00
LOCATION L0000374     VOLUME   459734.559 3772791.519 382.00
LOCATION L0000375     VOLUME   459736.559 3772791.576 382.00
LOCATION L0000376     VOLUME   459738.558 3772791.632 382.00
LOCATION L0000377     VOLUME   459740.557 3772791.689 381.99
LOCATION L0000378     VOLUME   459742.556 3772791.746 381.99
LOCATION L0000379     VOLUME   459744.555 3772791.802 381.99
LOCATION L0000380     VOLUME   459746.555 3772791.859 381.99
LOCATION L0000381     VOLUME   459748.554 3772791.915 381.99
LOCATION L0000382     VOLUME   459750.553 3772791.972 381.99
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LOCATION	L0000384	VOLUME	459754.551	3772792.085	381.99
LOCATION	L0000385	VOLUME	459756.551	3772792.141	381.99
LOCATION	L0000386	VOLUME	459758.550	3772792.198	381.99
LOCATION	L0000387	VOLUME	459760.549	3772792.255	382.00
LOCATION	L0000388	VOLUME	459762.548	3772792.311	382.01
LOCATION	L0000389	VOLUME	459764.547	3772792.368	382.02
LOCATION	L0000390	VOLUME	459766.547	3772792.424	382.04
LOCATION	L0000391	VOLUME	459768.546	3772792.481	382.05
LOCATION	L0000392	VOLUME	459770.545	3772792.537	382.06
LOCATION	L0000393	VOLUME	459772.544	3772792.594	382.07
LOCATION	L0000394	VOLUME	459774.543	3772792.650	382.08
LOCATION	L0000395	VOLUME	459776.543	3772792.707	382.09
LOCATION	L0000396	VOLUME	459778.542	3772792.764	382.11
LOCATION	L0000397	VOLUME	459780.541	3772792.820	382.12
LOCATION	L0000398	VOLUME	459782.540	3772792.877	382.13
LOCATION	L0000399	VOLUME	459784.539	3772792.933	382.14
LOCATION	L0000400	VOLUME	459786.539	3772792.990	382.15
LOCATION	L0000401	VOLUME	459788.538	3772793.046	382.15
LOCATION	L0000402	VOLUME	459790.537	3772793.103	382.16
LOCATION	L0000403	VOLUME	459792.536	3772793.160	382.17
LOCATION	L0000404	VOLUME	459794.535	3772793.216	382.17
LOCATION	L0000405	VOLUME	459796.535	3772793.273	382.18
LOCATION	L0000406	VOLUME	459798.534	3772793.329	382.19
LOCATION	L0000407	VOLUME	459800.533	3772793.386	382.19
LOCATION	L0000408	VOLUME	459802.532	3772793.442	382.20
LOCATION	L0000409	VOLUME	459804.531	3772793.499	382.21
LOCATION	L0000410	VOLUME	459806.531	3772793.555	382.21
LOCATION	L0000411	VOLUME	459808.530	3772793.612	382.22
LOCATION	L0000412	VOLUME	459810.529	3772793.669	382.22
LOCATION	L0000413	VOLUME	459812.528	3772793.725	382.21
LOCATION	L0000414	VOLUME	459814.527	3772793.782	382.21
LOCATION	L0000415	VOLUME	459816.527	3772793.838	382.20
LOCATION	L0000416	VOLUME	459818.526	3772793.895	382.19
LOCATION	L0000417	VOLUME	459820.525	3772793.951	382.19
LOCATION	L0000418	VOLUME	459822.524	3772794.008	382.18
LOCATION	L0000419	VOLUME	459824.523	3772794.065	382.18
LOCATION	L0000420	VOLUME	459826.523	3772794.121	382.17
LOCATION	L0000421	VOLUME	459828.522	3772794.178	382.17
LOCATION	L0000422	VOLUME	459830.521	3772794.234	382.17
LOCATION	L0000423	VOLUME	459832.520	3772794.291	382.16
LOCATION	L0000424	VOLUME	459834.519	3772794.347	382.16
LOCATION	L0000425	VOLUME	459836.519	3772794.404	382.15
LOCATION	L0000426	VOLUME	459838.518	3772794.460	382.15
LOCATION	L0000427	VOLUME	459840.517	3772794.517	382.15
LOCATION	L0000428	VOLUME	459842.516	3772794.574	382.15
LOCATION	L0000429	VOLUME	459844.515	3772794.630	382.15
LOCATION	L0000430	VOLUME	459846.515	3772794.687	382.14

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LOCATION L0000432     VOLUME   459850.513 3772794.800 382.14
LOCATION L0000433     VOLUME   459852.512 3772794.856 382.14
LOCATION L0000434     VOLUME   459854.511 3772794.913 382.14
LOCATION L0000435     VOLUME   459856.511 3772794.969 382.13
LOCATION L0000436     VOLUME   459858.510 3772795.026 382.13
LOCATION L0000437     VOLUME   459860.509 3772795.083 382.13
LOCATION L0000438     VOLUME   459862.508 3772795.139 382.13
LOCATION L0000439     VOLUME   459864.507 3772795.196 382.14
LOCATION L0000440     VOLUME   459866.507 3772795.252 382.15
LOCATION L0000441     VOLUME   459868.506 3772795.309 382.15
LOCATION L0000442     VOLUME   459870.505 3772795.365 382.16
LOCATION L0000443     VOLUME   459872.504 3772795.422 382.16
LOCATION L0000444     VOLUME   459874.503 3772795.479 382.17
LOCATION L0000445     VOLUME   459876.503 3772795.535 382.17
LOCATION L0000446     VOLUME   459878.502 3772795.592 382.18
LOCATION L0000447     VOLUME   459880.501 3772795.648 382.18
LOCATION L0000448     VOLUME   459882.500 3772795.705 382.19
LOCATION L0000449     VOLUME   459884.499 3772795.761 382.19
LOCATION L0000450     VOLUME   459886.499 3772795.818 382.20
LOCATION L0000451     VOLUME   459888.498 3772795.874 382.20
LOCATION L0000452     VOLUME   459890.497 3772795.931 382.21
LOCATION L0000453     VOLUME   459892.496 3772795.988 382.22
LOCATION L0000454     VOLUME   459894.495 3772796.044 382.23
LOCATION L0000455     VOLUME   459896.495 3772796.101 382.24
LOCATION L0000456     VOLUME   459898.494 3772796.157 382.25
LOCATION L0000457     VOLUME   459900.493 3772796.214 382.26
LOCATION L0000458     VOLUME   459902.492 3772796.270 382.27
LOCATION L0000459     VOLUME   459904.491 3772796.327 382.27
LOCATION L0000460     VOLUME   459906.491 3772796.383 382.28
LOCATION L0000461     VOLUME   459908.490 3772796.440 382.29
LOCATION L0000462     VOLUME   459910.489 3772796.497 382.30
LOCATION L0000463     VOLUME   459912.488 3772796.553 382.31
LOCATION L0000464     VOLUME   459914.487 3772796.610 382.32
LOCATION L0000465     VOLUME   459916.487 3772796.666 382.34
LOCATION L0000466     VOLUME   459918.486 3772796.723 382.35
LOCATION L0000467     VOLUME   459920.485 3772796.779 382.36
LOCATION L0000468     VOLUME   459922.484 3772796.836 382.37
LOCATION L0000469     VOLUME   459924.483 3772796.893 382.39
LOCATION L0000470     VOLUME   459926.483 3772796.949 382.40
LOCATION L0000471     VOLUME   459928.482 3772797.006 382.41
LOCATION L0000472     VOLUME   459930.481 3772797.062 382.43
LOCATION L0000473     VOLUME   459932.480 3772797.119 382.44
LOCATION L0000474     VOLUME   459934.479 3772797.175 382.45
LOCATION L0000475     VOLUME   459936.479 3772797.232 382.46
LOCATION L0000476     VOLUME   459938.478 3772797.288 382.48
LOCATION L0000477     VOLUME   459940.477 3772797.345 382.49
LOCATION L0000478     VOLUME   459942.476 3772797.402 382.51
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LOCATION	L0000479	VOLUME	459944.475	3772797.458	382.52
LOCATION	L0000480	VOLUME	459946.475	3772797.515	382.54
LOCATION	L0000481	VOLUME	459948.474	3772797.571	382.55
LOCATION	L0000482	VOLUME	459950.473	3772797.628	382.57
LOCATION	L0000483	VOLUME	459952.472	3772797.684	382.58
LOCATION	L0000484	VOLUME	459954.471	3772797.741	382.60
LOCATION	L0000485	VOLUME	459956.471	3772797.798	382.61
LOCATION	L0000486	VOLUME	459958.470	3772797.854	382.63
LOCATION	L0000487	VOLUME	459960.469	3772797.911	382.65
LOCATION	L0000488	VOLUME	459962.468	3772797.967	382.66
LOCATION	L0000489	VOLUME	459964.467	3772798.024	382.68
LOCATION	L0000490	VOLUME	459966.467	3772798.080	382.70
LOCATION	L0000491	VOLUME	459968.466	3772798.137	382.72
LOCATION	L0000492	VOLUME	459970.465	3772798.193	382.73
LOCATION	L0000493	VOLUME	459972.464	3772798.250	382.75
LOCATION	L0000494	VOLUME	459974.463	3772798.307	382.77
LOCATION	L0000495	VOLUME	459976.463	3772798.363	382.79
LOCATION	L0000496	VOLUME	459978.462	3772798.420	382.81
LOCATION	L0000497	VOLUME	459980.461	3772798.476	382.83
LOCATION	L0000498	VOLUME	459982.460	3772798.533	382.85
LOCATION	L0000499	VOLUME	459984.459	3772798.589	382.86
LOCATION	L0000500	VOLUME	459986.459	3772798.646	382.88
LOCATION	L0000501	VOLUME	459988.458	3772798.702	382.90
LOCATION	L0000502	VOLUME	459990.457	3772798.759	382.91
LOCATION	L0000503	VOLUME	459992.456	3772798.816	382.93
LOCATION	L0000504	VOLUME	459994.455	3772798.872	382.94
LOCATION	L0000505	VOLUME	459996.455	3772798.929	382.95
LOCATION	L0000506	VOLUME	459998.454	3772798.985	382.96
LOCATION	L0000507	VOLUME	460000.453	3772799.042	382.97
LOCATION	L0000508	VOLUME	460002.452	3772799.098	382.98
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LOCATION	L0000517	VOLUME	460020.445	3772799.607	383.07
LOCATION	L0000518	VOLUME	460022.444	3772799.664	383.08
LOCATION	L0000519	VOLUME	460024.443	3772799.721	383.09
LOCATION	L0000520	VOLUME	460026.443	3772799.777	383.10
LOCATION	L0000521	VOLUME	460028.442	3772799.834	383.11
LOCATION	L0000522	VOLUME	460030.441	3772799.890	383.11
LOCATION	L0000523	VOLUME	460032.440	3772799.947	383.12
LOCATION	L0000524	VOLUME	460034.439	3772800.003	383.13
LOCATION	L0000525	VOLUME	460036.439	3772800.060	383.14
LOCATION	L0000526	VOLUME	460038.438	3772800.116	383.14

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LOCATION L0000527     VOLUME   460040.437 3772800.173 383.15
LOCATION L0000528     VOLUME   460042.436 3772800.230 383.16
LOCATION L0000529     VOLUME   460044.435 3772800.286 383.16
LOCATION L0000530     VOLUME   460046.435 3772800.343 383.17
LOCATION L0000531     VOLUME   460048.434 3772800.399 383.17
LOCATION L0000532     VOLUME   460050.433 3772800.456 383.17
LOCATION L0000533     VOLUME   460052.432 3772800.512 383.18
LOCATION L0000534     VOLUME   460054.431 3772800.569 383.18
LOCATION L0000535     VOLUME   460056.431 3772800.626 383.19
LOCATION L0000536     VOLUME   460058.430 3772800.682 383.19
LOCATION L0000537     VOLUME   460060.429 3772800.739 383.20
LOCATION L0000538     VOLUME   460062.428 3772800.795 383.20
LOCATION L0000539     VOLUME   460064.427 3772800.852 383.21
LOCATION L0000540     VOLUME   460066.427 3772800.908 383.21
LOCATION L0000541     VOLUME   460068.426 3772800.965 383.20
LOCATION L0000542     VOLUME   460070.425 3772801.021 383.19
LOCATION L0000543     VOLUME   460072.424 3772801.078 383.18
LOCATION L0000544     VOLUME   460074.423 3772801.135 383.17
LOCATION L0000545     VOLUME   460076.423 3772801.191 383.16
LOCATION L0000546     VOLUME   460078.422 3772801.248 383.15
LOCATION L0000547     VOLUME   460080.421 3772801.304 383.14
LOCATION L0000548     VOLUME   460082.420 3772801.361 383.13
LOCATION L0000549     VOLUME   460084.419 3772801.417 383.12
LOCATION L0000550     VOLUME   460086.419 3772801.474 383.11
LOCATION L0000551     VOLUME   460088.418 3772801.531 383.10
LOCATION L0000552     VOLUME   460090.417 3772801.587 383.09
LOCATION L0000553     VOLUME   460092.416 3772801.644 383.09
LOCATION L0000554     VOLUME   460094.415 3772801.700 383.09
LOCATION L0000555     VOLUME   460096.415 3772801.757 383.10
LOCATION L0000556     VOLUME   460098.414 3772801.813 383.10
LOCATION L0000557     VOLUME   460100.413 3772801.870 383.10
LOCATION L0000558     VOLUME   460102.412 3772801.926 383.11
LOCATION L0000559     VOLUME   460104.411 3772801.983 383.11
LOCATION L0000560     VOLUME   460106.411 3772802.040 383.11
LOCATION L0000561     VOLUME   460108.410 3772802.096 383.12
LOCATION L0000562     VOLUME   460110.409 3772802.153 383.12
LOCATION L0000563     VOLUME   460112.408 3772802.209 383.12
LOCATION L0000564     VOLUME   460114.407 3772802.266 383.13
LOCATION L0000565     VOLUME   460116.407 3772802.322 383.13
LOCATION L0000566     VOLUME   460118.406 3772802.379 383.14
LOCATION L0000567     VOLUME   460120.405 3772802.435 383.15
LOCATION L0000568     VOLUME   460122.404 3772802.492 383.16
LOCATION L0000569     VOLUME   460124.403 3772802.549 383.16
LOCATION L0000570     VOLUME   460126.403 3772802.605 383.17
LOCATION L0000571     VOLUME   460128.402 3772802.662 383.18
LOCATION L0000572     VOLUME   460130.401 3772802.718 383.19
LOCATION L0000573     VOLUME   460132.400 3772802.775 383.20
LOCATION L0000574     VOLUME   460134.399 3772802.831 383.21
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LOCATION	L0000576	VOLUME	460138.398	3772802.945	383.23
LOCATION	L0000577	VOLUME	460140.397	3772803.001	383.23
LOCATION	L0000578	VOLUME	460142.396	3772803.058	383.24
LOCATION	L0000579	VOLUME	460144.395	3772803.114	383.25
LOCATION	L0000580	VOLUME	460146.395	3772803.171	383.25
LOCATION	L0000581	VOLUME	460148.394	3772803.227	383.25
LOCATION	L0000582	VOLUME	460150.393	3772803.284	383.25
LOCATION	L0000583	VOLUME	460152.392	3772803.340	383.25
LOCATION	L0000584	VOLUME	460154.391	3772803.397	383.25
LOCATION	L0000585	VOLUME	460156.391	3772803.454	383.26
LOCATION	L0000586	VOLUME	460158.390	3772803.510	383.26
LOCATION	L0000587	VOLUME	460160.389	3772803.567	383.26
LOCATION	L0000588	VOLUME	460162.388	3772803.623	383.26
LOCATION	L0000589	VOLUME	460164.387	3772803.680	383.26
LOCATION	L0000590	VOLUME	460166.387	3772803.736	383.26
LOCATION	L0000591	VOLUME	460168.386	3772803.793	383.27
LOCATION	L0000592	VOLUME	460170.385	3772803.849	383.27
LOCATION	L0000593	VOLUME	460172.384	3772803.906	383.27
LOCATION	L0000594	VOLUME	460174.383	3772803.963	383.28
LOCATION	L0000595	VOLUME	460176.383	3772804.019	383.28
LOCATION	L0000596	VOLUME	460178.382	3772804.076	383.29
LOCATION	L0000597	VOLUME	460180.381	3772804.132	383.29
LOCATION	L0000598	VOLUME	460182.380	3772804.189	383.30
LOCATION	L0000599	VOLUME	460184.379	3772804.245	383.30
LOCATION	L0000600	VOLUME	460186.379	3772804.302	383.30
LOCATION	L0000601	VOLUME	460188.378	3772804.359	383.31
LOCATION	L0000602	VOLUME	460190.377	3772804.415	383.31
LOCATION	L0000603	VOLUME	460192.376	3772804.472	383.32
LOCATION	L0000604	VOLUME	460194.375	3772804.528	383.32
LOCATION	L0000605	VOLUME	460196.375	3772804.585	383.31
LOCATION	L0000606	VOLUME	460198.374	3772804.641	383.31
LOCATION	L0000607	VOLUME	460200.373	3772804.698	383.30
LOCATION	L0000608	VOLUME	460202.372	3772804.754	383.30
LOCATION	L0000609	VOLUME	460204.371	3772804.811	383.29
LOCATION	L0000610	VOLUME	460206.371	3772804.868	383.29
LOCATION	L0000611	VOLUME	460208.370	3772804.924	383.28
LOCATION	L0000612	VOLUME	460210.369	3772804.981	383.28
LOCATION	L0000613	VOLUME	460212.368	3772805.037	383.27
LOCATION	L0000614	VOLUME	460214.367	3772805.094	383.27
LOCATION	L0000615	VOLUME	460216.367	3772805.150	383.26
LOCATION	L0000616	VOLUME	460218.366	3772805.207	383.26
LOCATION	L0000617	VOLUME	460220.365	3772805.264	383.25
LOCATION	L0000618	VOLUME	460222.364	3772805.320	383.25
LOCATION	L0000619	VOLUME	460224.363	3772805.377	383.25
LOCATION	L0000620	VOLUME	460226.363	3772805.433	383.25
LOCATION	L0000621	VOLUME	460228.362	3772805.490	383.25
LOCATION	L0000622	VOLUME	460230.361	3772805.546	383.25

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LOCATION L0000623     VOLUME   460232.360 3772805.603 383.25
LOCATION L0000624     VOLUME   460234.359 3772805.659 383.25
LOCATION L0000625     VOLUME   460236.359 3772805.716 383.25
LOCATION L0000626     VOLUME   460238.358 3772805.773 383.25
LOCATION L0000627     VOLUME   460240.357 3772805.829 383.24
LOCATION L0000628     VOLUME   460242.356 3772805.886 383.24
LOCATION L0000629     VOLUME   460244.355 3772805.942 383.24
LOCATION L0000630     VOLUME   460246.355 3772805.999 383.24
LOCATION L0000631     VOLUME   460248.354 3772806.055 383.24
LOCATION L0000632     VOLUME   460250.353 3772806.112 383.23
LOCATION L0000633     VOLUME   460252.352 3772806.168 383.23
LOCATION L0000634     VOLUME   460254.351 3772806.225 383.22
LOCATION L0000635     VOLUME   460256.351 3772806.282 383.22
LOCATION L0000636     VOLUME   460258.350 3772806.338 383.22
LOCATION L0000637     VOLUME   460260.349 3772806.395 383.21
LOCATION L0000638     VOLUME   460262.348 3772806.451 383.21
LOCATION L0000639     VOLUME   460264.347 3772806.508 383.20
LOCATION L0000640     VOLUME   460266.347 3772806.564 383.20
LOCATION L0000641     VOLUME   460268.346 3772806.621 383.20
LOCATION L0000642     VOLUME   460270.345 3772806.678 383.19
LOCATION L0000643     VOLUME   460272.344 3772806.734 383.20
LOCATION L0000644     VOLUME   460274.343 3772806.791 383.20
LOCATION L0000645     VOLUME   460276.343 3772806.847 383.20
LOCATION L0000646     VOLUME   460278.342 3772806.904 383.21
LOCATION L0000647     VOLUME   460280.341 3772806.960 383.21
LOCATION L0000648     VOLUME   460282.340 3772807.017 383.22
LOCATION L0000649     VOLUME   460284.339 3772807.073 383.22
LOCATION L0000650     VOLUME   460286.339 3772807.130 383.23
LOCATION L0000651     VOLUME   460288.338 3772807.187 383.23
LOCATION L0000652     VOLUME   460290.337 3772807.243 383.24
LOCATION L0000653     VOLUME   460292.336 3772807.300 383.24
LOCATION L0000654     VOLUME   460294.335 3772807.356 383.25
LOCATION L0000655     VOLUME   460296.335 3772807.413 383.25
LOCATION L0000656     VOLUME   460298.334 3772807.469 383.25
LOCATION L0000657     VOLUME   460300.333 3772807.526 383.24
LOCATION L0000658     VOLUME   460302.332 3772807.583 383.24
LOCATION L0000659     VOLUME   460304.331 3772807.639 383.23
LOCATION L0000660     VOLUME   460306.331 3772807.696 383.22
LOCATION L0000661     VOLUME   460308.330 3772807.752 383.22
LOCATION L0000662     VOLUME   460310.329 3772807.809 383.21
LOCATION L0000663     VOLUME   460312.328 3772807.865 383.21
LOCATION L0000664     VOLUME   460314.327 3772807.922 383.20
LOCATION L0000665     VOLUME   460316.327 3772807.978 383.20
LOCATION L0000666     VOLUME   460318.326 3772808.035 383.19
LOCATION L0000667     VOLUME   460320.325 3772808.092 383.18
LOCATION L0000668     VOLUME   460322.324 3772808.148 383.18
LOCATION L0000669     VOLUME   460324.323 3772808.205 383.17
LOCATION L0000670     VOLUME   460326.323 3772808.261 383.16
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LOCATION	L0000672	VOLUME	460330.321	3772808.374	383.14
LOCATION	L0000673	VOLUME	460332.320	3772808.431	383.13
LOCATION	L0000674	VOLUME	460334.319	3772808.487	383.12
LOCATION	L0000675	VOLUME	460336.319	3772808.544	383.11
LOCATION	L0000676	VOLUME	460338.318	3772808.601	383.10
LOCATION	L0000677	VOLUME	460340.317	3772808.657	383.09
LOCATION	L0000678	VOLUME	460342.316	3772808.714	383.08
LOCATION	L0000679	VOLUME	460344.315	3772808.770	383.07
LOCATION	L0000680	VOLUME	460346.315	3772808.827	383.06
LOCATION	L0000681	VOLUME	460348.314	3772808.883	383.05
LOCATION	L0000682	VOLUME	460350.313	3772808.940	383.01
LOCATION	L0000683	VOLUME	460352.312	3772808.997	382.98
LOCATION	L0000684	VOLUME	460354.311	3772809.053	382.95
LOCATION	L0000685	VOLUME	460356.311	3772809.110	382.92
LOCATION	L0000686	VOLUME	460358.310	3772809.166	382.89
LOCATION	L0000687	VOLUME	460360.309	3772809.223	382.86
LOCATION	L0000688	VOLUME	460362.308	3772809.279	382.82
LOCATION	L0000689	VOLUME	460364.307	3772809.336	382.79
LOCATION	L0000690	VOLUME	460366.307	3772809.392	382.76
LOCATION	L0000691	VOLUME	460368.306	3772809.449	382.73
LOCATION	L0000692	VOLUME	460370.305	3772809.506	382.70
LOCATION	L0000693	VOLUME	460372.304	3772809.562	382.66
LOCATION	L0000694	VOLUME	460374.303	3772809.619	382.63
LOCATION	L0000695	VOLUME	460376.303	3772809.675	382.60
LOCATION	L0000696	VOLUME	460378.302	3772809.732	382.57
LOCATION	L0000697	VOLUME	460380.301	3772809.788	382.53
LOCATION	L0000698	VOLUME	460382.300	3772809.845	382.50
LOCATION	L0000699	VOLUME	460384.299	3772809.901	382.47
LOCATION	L0000700	VOLUME	460386.299	3772809.958	382.44
LOCATION	L0000701	VOLUME	460388.298	3772810.015	382.41
LOCATION	L0000702	VOLUME	460390.297	3772810.071	382.37
LOCATION	L0000703	VOLUME	460392.296	3772810.128	382.34
LOCATION	L0000704	VOLUME	460394.295	3772810.184	382.31
LOCATION	L0000705	VOLUME	460396.295	3772810.241	382.27
LOCATION	L0000706	VOLUME	460398.294	3772810.297	382.24
LOCATION	L0000707	VOLUME	460400.293	3772810.354	382.22
LOCATION	L0000708	VOLUME	460402.292	3772810.411	382.21
LOCATION	L0000709	VOLUME	460404.291	3772810.467	382.20
LOCATION	L0000710	VOLUME	460406.291	3772810.524	382.19
LOCATION	L0000711	VOLUME	460408.290	3772810.580	382.17
LOCATION	L0000712	VOLUME	460410.289	3772810.637	382.16
LOCATION	L0000713	VOLUME	460412.288	3772810.693	382.15
LOCATION	L0000714	VOLUME	460414.287	3772810.750	382.14
LOCATION	L0000715	VOLUME	460416.287	3772810.806	382.12
LOCATION	L0000716	VOLUME	460418.286	3772810.863	382.11
LOCATION	L0000717	VOLUME	460420.285	3772810.920	382.10
LOCATION	L0000718	VOLUME	460422.284	3772810.976	382.09

LOCATION	L0000719	VOLUME	460424.283	3772811.033	382.07
LOCATION	L0000720	VOLUME	460426.283	3772811.089	382.07
LOCATION	L0000721	VOLUME	460428.282	3772811.146	382.07
LOCATION	L0000722	VOLUME	460430.281	3772811.202	382.07
LOCATION	L0000723	VOLUME	460432.280	3772811.259	382.07
LOCATION	L0000724	VOLUME	460434.279	3772811.316	382.07
LOCATION	L0000725	VOLUME	460436.279	3772811.372	382.07
LOCATION	L0000726	VOLUME	460438.278	3772811.429	382.07
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LOCATION	L0000728	VOLUME	460442.276	3772811.542	382.07
LOCATION	L0000729	VOLUME	460444.275	3772811.598	382.07
LOCATION	L0000730	VOLUME	460446.275	3772811.655	382.07
LOCATION	L0000731	VOLUME	460448.274	3772811.711	382.07
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LOCATION	L0000736	VOLUME	460458.270	3772811.994	382.10
LOCATION	L0000737	VOLUME	460460.269	3772812.051	382.10
LOCATION	L0000738	VOLUME	460462.268	3772812.107	382.11
LOCATION	L0000739	VOLUME	460464.267	3772812.164	382.12
LOCATION	L0000740	VOLUME	460466.267	3772812.220	382.12
LOCATION	L0000741	VOLUME	460468.266	3772812.277	382.13
LOCATION	L0000742	VOLUME	460470.265	3772812.334	382.13
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LOCATION	L0000745	VOLUME	460476.263	3772812.503	382.15
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LOCATION	L0000748	VOLUME	460482.260	3772812.673	382.18
LOCATION	L0000749	VOLUME	460484.259	3772812.730	382.19
LOCATION	L0000750	VOLUME	460486.259	3772812.786	382.20
LOCATION	L0000751	VOLUME	460488.258	3772812.843	382.21
LOCATION	L0000752	VOLUME	460490.257	3772812.899	382.22
LOCATION	L0000753	VOLUME	460492.256	3772812.956	382.23
LOCATION	L0000754	VOLUME	460494.255	3772813.012	382.24
LOCATION	L0000755	VOLUME	460496.255	3772813.069	382.25
LOCATION	L0000756	VOLUME	460498.254	3772813.125	382.26
LOCATION	L0000757	VOLUME	460500.253	3772813.182	382.27
LOCATION	L0000758	VOLUME	460502.252	3772813.239	382.28
LOCATION	L0000759	VOLUME	460504.251	3772813.295	382.28
LOCATION	L0000760	VOLUME	460506.251	3772813.352	382.28
LOCATION	L0000761	VOLUME	460508.250	3772813.408	382.29
LOCATION	L0000762	VOLUME	460510.249	3772813.465	382.29
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LOCATION	L0000765	VOLUME	460516.247	3772813.634	382.30
LOCATION	L0000766	VOLUME	460518.246	3772813.691	382.30

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LOCATION L0000768     VOLUME   460522.244 3772813.804 382.31
LOCATION L0000769     VOLUME   460524.243 3772813.861 382.31
LOCATION L0000770     VOLUME   460526.243 3772813.917 382.32
LOCATION L0000771     VOLUME   460528.242 3772813.974 382.32
LOCATION L0000772     VOLUME   460530.241 3772814.030 382.32
LOCATION L0000773     VOLUME   460532.240 3772814.087 382.31
LOCATION L0000774     VOLUME   460534.239 3772814.144 382.31
LOCATION L0000775     VOLUME   460536.239 3772814.200 382.31
LOCATION L0000776     VOLUME   460538.238 3772814.257 382.31
LOCATION L0000777     VOLUME   460540.237 3772814.313 382.30
LOCATION L0000778     VOLUME   460542.236 3772814.370 382.30
LOCATION L0000779     VOLUME   460544.235 3772814.426 382.30
LOCATION L0000780     VOLUME   460546.235 3772814.483 382.30
LOCATION L0000781     VOLUME   460548.234 3772814.539 382.29
LOCATION L0000782     VOLUME   460550.233 3772814.596 382.29
LOCATION L0000783     VOLUME   460552.232 3772814.653 382.29
LOCATION L0000784     VOLUME   460554.231 3772814.709 382.29
LOCATION L0000785     VOLUME   460556.231 3772814.766 382.30
LOCATION L0000786     VOLUME   460558.230 3772814.822 382.30
LOCATION L0000787     VOLUME   460560.229 3772814.879 382.30
LOCATION L0000788     VOLUME   460562.228 3772814.935 382.31
LOCATION L0000789     VOLUME   460564.227 3772814.992 382.31
LOCATION L0000790     VOLUME   460566.227 3772815.049 382.31
LOCATION L0000791     VOLUME   460568.226 3772815.105 382.32
LOCATION L0000792     VOLUME   460570.225 3772815.162 382.32
LOCATION L0000793     VOLUME   460572.224 3772815.218 382.33
LOCATION L0000794     VOLUME   460574.223 3772815.275 382.33
LOCATION L0000795     VOLUME   460576.223 3772815.331 382.33
LOCATION L0000796     VOLUME   460578.222 3772815.388 382.34
LOCATION L0000797     VOLUME   460580.221 3772815.444 382.34
LOCATION L0000798     VOLUME   460582.220 3772815.501 382.34
LOCATION L0000799     VOLUME   460584.219 3772815.558 382.34
LOCATION L0000800     VOLUME   460586.219 3772815.614 382.34
LOCATION L0000801     VOLUME   460588.218 3772815.671 382.34
LOCATION L0000802     VOLUME   460590.217 3772815.727 382.34
LOCATION L0000803     VOLUME   460592.216 3772815.784 382.35
LOCATION L0000804     VOLUME   460594.215 3772815.840 382.35
LOCATION L0000805     VOLUME   460596.215 3772815.897 382.35
LOCATION L0000806     VOLUME   460598.214 3772815.953 382.35
LOCATION L0000807     VOLUME   460600.213 3772816.010 382.35
LOCATION L0000808     VOLUME   460602.212 3772816.067 382.35
LOCATION L0000809     VOLUME   460604.211 3772816.123 382.35
LOCATION L0000810     VOLUME   460606.211 3772816.180 382.34
LOCATION L0000811     VOLUME   460608.210 3772816.236 382.32
LOCATION L0000812     VOLUME   460610.209 3772816.293 382.30
LOCATION L0000813     VOLUME   460612.208 3772816.349 382.29
LOCATION L0000814     VOLUME   460614.207 3772816.406 382.27
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LOCATION L0000816     VOLUME   460618.206 3772816.519 382.24
LOCATION L0000817     VOLUME   460620.205 3772816.576 382.23
LOCATION L0000818     VOLUME   460622.204 3772816.632 382.21
LOCATION L0000819     VOLUME   460624.203 3772816.689 382.20
LOCATION L0000820     VOLUME   460626.203 3772816.745 382.18
LOCATION L0000821     VOLUME   460628.202 3772816.802 382.17
LOCATION L0000822     VOLUME   460630.201 3772816.858 382.16
LOCATION L0000823     VOLUME   460632.200 3772816.915 382.15
LOCATION L0000824     VOLUME   460634.199 3772816.972 382.13
LOCATION L0000825     VOLUME   460636.199 3772817.028 382.12
LOCATION L0000826     VOLUME   460638.198 3772817.085 382.11
LOCATION L0000827     VOLUME   460640.197 3772817.141 382.10
LOCATION L0000828     VOLUME   460642.196 3772817.198 382.09
LOCATION L0000829     VOLUME   460644.195 3772817.254 382.08
LOCATION L0000830     VOLUME   460646.195 3772817.311 382.07
LOCATION L0000831     VOLUME   460648.194 3772817.367 382.06
LOCATION L0000832     VOLUME   460650.193 3772817.424 382.05
LOCATION L0000833     VOLUME   460652.192 3772817.481 382.04
LOCATION L0000834     VOLUME   460654.191 3772817.537 382.03
LOCATION L0000835     VOLUME   460656.191 3772817.594 382.03
LOCATION L0000836     VOLUME   460658.190 3772817.650 382.02
LOCATION L0000837     VOLUME   460660.189 3772817.707 382.02
LOCATION L0000838     VOLUME   460662.188 3772817.763 382.02
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LOCATION L0000840     VOLUME   460666.187 3772817.877 382.01
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LOCATION L0000842     VOLUME   460670.185 3772817.990 382.00
LOCATION L0000843     VOLUME   460672.184 3772818.046 381.99
LOCATION L0000844     VOLUME   460674.183 3772818.103 381.99
LOCATION L0000845     VOLUME   460676.183 3772818.159 381.98
LOCATION L0000846     VOLUME   460678.182 3772818.216 381.98
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LOCATION L0000848     VOLUME   460682.180 3772818.329 381.97
LOCATION L0000849     VOLUME   460684.179 3772818.386 381.96
LOCATION L0000850     VOLUME   460686.179 3772818.442 381.96
LOCATION L0000851     VOLUME   460688.178 3772818.499 381.96
LOCATION L0000852     VOLUME   460690.177 3772818.555 381.95
LOCATION L0000853     VOLUME   460692.176 3772818.612 381.95
LOCATION L0000854     VOLUME   460694.175 3772818.668 381.95
LOCATION L0000855     VOLUME   460696.175 3772818.725 381.94
LOCATION L0000856     VOLUME   460698.174 3772818.782 381.94
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LOCATION L0000858     VOLUME   460702.172 3772818.895 381.93
LOCATION L0000859     VOLUME   460704.171 3772818.951 381.93
LOCATION L0000860     VOLUME   460706.171 3772819.008 381.92
LOCATION L0000861     VOLUME   460708.170 3772819.064 381.92
LOCATION L0000862     VOLUME   460710.169 3772819.121 381.93
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LOCATION L0000864     VOLUME   460714.167 3772819.234 381.93
LOCATION L0000865     VOLUME   460716.167 3772819.291 381.93
LOCATION L0000866     VOLUME   460718.166 3772819.347 381.93
LOCATION L0000867     VOLUME   460720.165 3772819.404 381.93
LOCATION L0000868     VOLUME   460722.164 3772819.460 381.93
LOCATION L0000869     VOLUME   460724.163 3772819.517 381.93
LOCATION L0000870     VOLUME   460726.163 3772819.573 381.93
LOCATION L0000871     VOLUME   460728.162 3772819.630 381.93
LOCATION L0000872     VOLUME   460730.161 3772819.686 381.93
LOCATION L0000873     VOLUME   460732.160 3772819.743 381.93
LOCATION L0000874     VOLUME   460734.159 3772819.800 381.93
LOCATION L0000875     VOLUME   460736.159 3772819.856 381.93
LOCATION L0000876     VOLUME   460738.158 3772819.913 381.93
LOCATION L0000877     VOLUME   460740.157 3772819.969 381.93
LOCATION L0000878     VOLUME   460742.156 3772820.026 381.93
LOCATION L0000879     VOLUME   460744.155 3772820.082 381.93
LOCATION L0000880     VOLUME   460746.155 3772820.139 381.93
LOCATION L0000881     VOLUME   460748.154 3772820.196 381.93
LOCATION L0000882     VOLUME   460750.153 3772820.252 381.93
LOCATION L0000883     VOLUME   460752.152 3772820.309 381.93
LOCATION L0000884     VOLUME   460754.151 3772820.365 381.93
LOCATION L0000885     VOLUME   460756.151 3772820.422 381.93
LOCATION L0000886     VOLUME   460758.150 3772820.478 381.93
LOCATION L0000887     VOLUME   460760.149 3772820.535 381.93
LOCATION L0000888     VOLUME   460762.148 3772820.591 381.94
LOCATION L0000889     VOLUME   460764.147 3772820.648 381.94
LOCATION L0000890     VOLUME   460766.147 3772820.705 381.95
LOCATION L0000891     VOLUME   460768.146 3772820.761 381.95
LOCATION L0000892     VOLUME   460770.145 3772820.818 381.96
LOCATION L0000893     VOLUME   460772.144 3772820.874 381.96
LOCATION L0000894     VOLUME   460774.143 3772820.931 381.97
LOCATION L0000895     VOLUME   460776.143 3772820.987 381.97
LOCATION L0000896     VOLUME   460778.142 3772821.044 381.98
LOCATION L0000897     VOLUME   460780.141 3772821.101 381.98
LOCATION L0000898     VOLUME   460782.140 3772821.157 381.99
LOCATION L0000899     VOLUME   460784.139 3772821.214 381.99
LOCATION L0000900     VOLUME   460786.139 3772821.270 382.00
LOCATION L0000901     VOLUME   460788.138 3772821.327 382.00
LOCATION L0000902     VOLUME   460790.137 3772821.383 382.01
LOCATION L0000903     VOLUME   460792.136 3772821.440 382.01
LOCATION L0000904     VOLUME   460794.135 3772821.496 382.02
LOCATION L0000905     VOLUME   460796.135 3772821.553 382.02
LOCATION L0000906     VOLUME   460798.134 3772821.610 382.03
LOCATION L0000907     VOLUME   460800.133 3772821.666 382.03
LOCATION L0000908     VOLUME   460802.132 3772821.723 382.04
LOCATION L0000909     VOLUME   460804.131 3772821.779 382.04
LOCATION L0000910     VOLUME   460806.131 3772821.836 382.05
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LOCATION	L0000912	VOLUME	460810.129	3772821.949	382.06
LOCATION	L0000913	VOLUME	460812.128	3772822.005	382.06
LOCATION	L0000914	VOLUME	460814.127	3772822.062	382.06
LOCATION	L0000915	VOLUME	460816.127	3772822.119	382.06
LOCATION	L0000916	VOLUME	460818.126	3772822.175	382.06
LOCATION	L0000917	VOLUME	460820.125	3772822.232	382.06
LOCATION	L0000918	VOLUME	460822.124	3772822.288	382.06
LOCATION	L0000919	VOLUME	460824.123	3772822.345	382.06
LOCATION	L0000920	VOLUME	460826.123	3772822.401	382.06
LOCATION	L0000921	VOLUME	460828.122	3772822.458	382.06
LOCATION	L0000922	VOLUME	460830.121	3772822.515	382.06
LOCATION	L0000923	VOLUME	460832.120	3772822.571	382.06
LOCATION	L0000924	VOLUME	460834.119	3772822.628	382.06
LOCATION	L0000925	VOLUME	460836.119	3772822.684	382.06
LOCATION	L0000926	VOLUME	460838.118	3772822.741	382.07
LOCATION	L0000927	VOLUME	460840.117	3772822.797	382.07
LOCATION	L0000928	VOLUME	460842.116	3772822.854	382.07
LOCATION	L0000929	VOLUME	460844.115	3772822.910	382.07
LOCATION	L0000930	VOLUME	460846.115	3772822.967	382.07
LOCATION	L0000931	VOLUME	460848.114	3772823.024	382.07
LOCATION	L0000932	VOLUME	460850.113	3772823.080	382.08
LOCATION	L0000933	VOLUME	460852.112	3772823.137	382.08
LOCATION	L0000934	VOLUME	460854.111	3772823.193	382.08
LOCATION	L0000935	VOLUME	460856.111	3772823.250	382.08
LOCATION	L0000936	VOLUME	460858.110	3772823.306	382.08
LOCATION	L0000937	VOLUME	460860.109	3772823.363	382.09
LOCATION	L0000938	VOLUME	460862.108	3772823.419	382.09
LOCATION	L0000939	VOLUME	460864.107	3772823.476	382.09
LOCATION	L0000940	VOLUME	460866.107	3772823.533	382.09
LOCATION	L0000941	VOLUME	460868.106	3772823.589	382.09
LOCATION	L0000942	VOLUME	460870.105	3772823.646	382.09
LOCATION	L0000943	VOLUME	460872.104	3772823.702	382.09
LOCATION	L0000944	VOLUME	460874.103	3772823.759	382.09
LOCATION	L0000945	VOLUME	460876.103	3772823.815	382.09
LOCATION	L0000946	VOLUME	460878.102	3772823.872	382.10
LOCATION	L0000947	VOLUME	460880.101	3772823.929	382.10
LOCATION	L0000948	VOLUME	460882.100	3772823.985	382.10
LOCATION	L0000949	VOLUME	460884.099	3772824.042	382.10
LOCATION	L0000950	VOLUME	460886.099	3772824.098	382.10
LOCATION	L0000951	VOLUME	460888.098	3772824.155	382.10
LOCATION	L0000952	VOLUME	460890.097	3772824.211	382.10
LOCATION	L0000953	VOLUME	460892.096	3772824.268	382.10
LOCATION	L0000954	VOLUME	460894.095	3772824.324	382.10
LOCATION	L0000955	VOLUME	460896.095	3772824.381	382.10
LOCATION	L0000956	VOLUME	460898.094	3772824.438	382.10
LOCATION	L0000957	VOLUME	460900.093	3772824.494	382.10
LOCATION	L0000958	VOLUME	460902.092	3772824.551	382.10

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LOCATION L0000963     VOLUME   460912.088 3772824.834 382.10
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LOCATION L0000967     VOLUME   460920.085 3772825.060 382.09
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LOCATION L0000994     VOLUME   460974.063 3772826.587 382.06
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LOCATION L0001005     VOLUME   460996.055 3772827.209 382.11
LOCATION L0001006     VOLUME   460998.054 3772827.266 382.12
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LOCATION L0001577     VOLUME   462139.597 3772859.562 380.44
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LOCATION L0001582     VOLUME   462149.593 3772859.845 380.49
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LOCATION L0001678     VOLUME   462341.516 3772865.274 380.40
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LOCATION L0001683     VOLUME   462351.512 3772865.557 380.39
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LOCATION L0001701     VOLUME   462387.498 3772866.575 380.32
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LOCATION L0001726     VOLUME   462437.478 3772867.989 380.19
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LOCATION L0001734     VOLUME   462453.472 3772868.442 380.13
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LOCATION	L0001782	VOLUME	462549.433	3772871.157	379.78
LOCATION	L0001783	VOLUME	462551.432	3772871.213	379.77
LOCATION	L0001784	VOLUME	462553.432	3772871.270	379.76
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LOCATION	L0001787	VOLUME	462559.429	3772871.439	379.72
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LOCATION	L0001796	VOLUME	462577.422	3772871.949	379.61
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LOCATION	L0001812	VOLUME	462609.409	3772872.854	379.42
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LOCATION	L0001817	VOLUME	462619.405	3772873.136	379.36
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LOCATION	L0001819	VOLUME	462623.404	3772873.249	379.33
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LOCATION L0001870     VOLUME   462725.363 3772876.134 379.06
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** AERMOD Receptor Pathway
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**
**
RE STARTING
   INCLUDED "Palmetto Replacement Site.rou"
RE FINISHED
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** AERMOD Meteorology Pathway
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   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
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** AERMOD Output Pathway
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   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
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   PLOTFILE 24 ALL 1ST "Palmetto Replacement Site.AD\24H1GALL.PLT" 32
   PLOTFILE ANNUAL ALL "Palmetto Replacement Site.AD\AN00GALL.PLT" 33
   SUMMFILE "Palmetto Replacement Site.sum"
OU FINISHED
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** Project Parameters
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** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     11
** ZONEINX  0
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** AERMOD Input Produced by:
** AERMOD View Ver. 9.8.3
** Lakes Environmental Software Inc.
** Date: 5/8/2020
** File: C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement
Site.ADI
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** AERMOD Control Pathway
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   MODELOPT DFAULT CONC
   AVERTIME 1 24 ANNUAL
   URBANOPT 2035210
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "Palmetto Replacement Site.err"
CO FINISHED
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** AERMOD Source Pathway
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SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Metrolink RR
** PREFIX
** Length of Side = 2.00
** Configuration = Adjacent
** Emission Rate = 0.0034
** Vertical Dimension = 10.50
** SZINIT = 4.88
** Nodes = 2
** 458987.858, 3772770.394, 379.19, 4.50, 0.93
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** 463597.734, 3772900.815, 376.17, 4.50, 0.93
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LOCATION	L0000068	VOLUME	459122.804	3772774.212	379.80
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LOCATION	L0000245	VOLUME	459476.663	3772784.223	381.43
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LOCATION	L0000265	VOLUME	459516.647	3772785.354	381.51
LOCATION	L0000266	VOLUME	459518.646	3772785.411	381.52
LOCATION	L0000267	VOLUME	459520.645	3772785.467	381.53
LOCATION	L0000268	VOLUME	459522.644	3772785.524	381.54
LOCATION	L0000269	VOLUME	459524.643	3772785.580	381.55
LOCATION	L0000270	VOLUME	459526.643	3772785.637	381.56
LOCATION	L0000271	VOLUME	459528.642	3772785.694	381.57
LOCATION	L0000272	VOLUME	459530.641	3772785.750	381.58
LOCATION	L0000273	VOLUME	459532.640	3772785.807	381.58
LOCATION	L0000274	VOLUME	459534.639	3772785.863	381.59
LOCATION	L0000275	VOLUME	459536.639	3772785.920	381.60
LOCATION	L0000276	VOLUME	459538.638	3772785.976	381.60
LOCATION	L0000277	VOLUME	459540.637	3772786.033	381.61
LOCATION	L0000278	VOLUME	459542.636	3772786.089	381.62
LOCATION	L0000279	VOLUME	459544.635	3772786.146	381.63
LOCATION	L0000280	VOLUME	459546.635	3772786.203	381.63
LOCATION	L0000281	VOLUME	459548.634	3772786.259	381.64
LOCATION	L0000282	VOLUME	459550.633	3772786.316	381.65
LOCATION	L0000283	VOLUME	459552.632	3772786.372	381.65
LOCATION	L0000284	VOLUME	459554.631	3772786.429	381.66
LOCATION	L0000285	VOLUME	459556.631	3772786.485	381.66
LOCATION	L0000286	VOLUME	459558.630	3772786.542	381.67

LOCATION	L0000287	VOLUME	459560.629	3772786.598	381.67
LOCATION	L0000288	VOLUME	459562.628	3772786.655	381.68
LOCATION	L0000289	VOLUME	459564.627	3772786.712	381.68
LOCATION	L0000290	VOLUME	459566.627	3772786.768	381.69
LOCATION	L0000291	VOLUME	459568.626	3772786.825	381.69
LOCATION	L0000292	VOLUME	459570.625	3772786.881	381.70
LOCATION	L0000293	VOLUME	459572.624	3772786.938	381.70
LOCATION	L0000294	VOLUME	459574.623	3772786.994	381.71
LOCATION	L0000295	VOLUME	459576.623	3772787.051	381.71
LOCATION	L0000296	VOLUME	459578.622	3772787.108	381.72
LOCATION	L0000297	VOLUME	459580.621	3772787.164	381.72
LOCATION	L0000298	VOLUME	459582.620	3772787.221	381.72
LOCATION	L0000299	VOLUME	459584.619	3772787.277	381.72
LOCATION	L0000300	VOLUME	459586.619	3772787.334	381.72
LOCATION	L0000301	VOLUME	459588.618	3772787.390	381.72
LOCATION	L0000302	VOLUME	459590.617	3772787.447	381.72
LOCATION	L0000303	VOLUME	459592.616	3772787.503	381.72
LOCATION	L0000304	VOLUME	459594.615	3772787.560	381.72
LOCATION	L0000305	VOLUME	459596.615	3772787.617	381.72
LOCATION	L0000306	VOLUME	459598.614	3772787.673	381.73
LOCATION	L0000307	VOLUME	459600.613	3772787.730	381.73
LOCATION	L0000308	VOLUME	459602.612	3772787.786	381.73
LOCATION	L0000309	VOLUME	459604.611	3772787.843	381.73
LOCATION	L0000310	VOLUME	459606.611	3772787.899	381.74
LOCATION	L0000311	VOLUME	459608.610	3772787.956	381.75
LOCATION	L0000312	VOLUME	459610.609	3772788.013	381.75
LOCATION	L0000313	VOLUME	459612.608	3772788.069	381.76
LOCATION	L0000314	VOLUME	459614.607	3772788.126	381.77
LOCATION	L0000315	VOLUME	459616.607	3772788.182	381.77
LOCATION	L0000316	VOLUME	459618.606	3772788.239	381.78
LOCATION	L0000317	VOLUME	459620.605	3772788.295	381.79
LOCATION	L0000318	VOLUME	459622.604	3772788.352	381.80
LOCATION	L0000319	VOLUME	459624.603	3772788.408	381.80
LOCATION	L0000320	VOLUME	459626.603	3772788.465	381.81
LOCATION	L0000321	VOLUME	459628.602	3772788.522	381.82
LOCATION	L0000322	VOLUME	459630.601	3772788.578	381.83
LOCATION	L0000323	VOLUME	459632.600	3772788.635	381.84
LOCATION	L0000324	VOLUME	459634.599	3772788.691	381.85
LOCATION	L0000325	VOLUME	459636.599	3772788.748	381.86
LOCATION	L0000326	VOLUME	459638.598	3772788.804	381.88
LOCATION	L0000327	VOLUME	459640.597	3772788.861	381.89
LOCATION	L0000328	VOLUME	459642.596	3772788.917	381.90
LOCATION	L0000329	VOLUME	459644.595	3772788.974	381.91
LOCATION	L0000330	VOLUME	459646.595	3772789.031	381.92
LOCATION	L0000331	VOLUME	459648.594	3772789.087	381.94
LOCATION	L0000332	VOLUME	459650.593	3772789.144	381.95
LOCATION	L0000333	VOLUME	459652.592	3772789.200	381.96
LOCATION	L0000334	VOLUME	459654.591	3772789.257	381.97

LOCATION	L0000335	VOLUME	459656.591	3772789.313	381.98
LOCATION	L0000336	VOLUME	459658.590	3772789.370	381.99
LOCATION	L0000337	VOLUME	459660.589	3772789.427	382.00
LOCATION	L0000338	VOLUME	459662.588	3772789.483	382.00
LOCATION	L0000339	VOLUME	459664.587	3772789.540	382.01
LOCATION	L0000340	VOLUME	459666.587	3772789.596	382.02
LOCATION	L0000341	VOLUME	459668.586	3772789.653	382.02
LOCATION	L0000342	VOLUME	459670.585	3772789.709	382.03
LOCATION	L0000343	VOLUME	459672.584	3772789.766	382.04
LOCATION	L0000344	VOLUME	459674.583	3772789.822	382.05
LOCATION	L0000345	VOLUME	459676.583	3772789.879	382.05
LOCATION	L0000346	VOLUME	459678.582	3772789.936	382.06
LOCATION	L0000347	VOLUME	459680.581	3772789.992	382.07
LOCATION	L0000348	VOLUME	459682.580	3772790.049	382.07
LOCATION	L0000349	VOLUME	459684.579	3772790.105	382.07
LOCATION	L0000350	VOLUME	459686.579	3772790.162	382.07
LOCATION	L0000351	VOLUME	459688.578	3772790.218	382.07
LOCATION	L0000352	VOLUME	459690.577	3772790.275	382.07
LOCATION	L0000353	VOLUME	459692.576	3772790.332	382.07
LOCATION	L0000354	VOLUME	459694.575	3772790.388	382.07
LOCATION	L0000355	VOLUME	459696.575	3772790.445	382.07
LOCATION	L0000356	VOLUME	459698.574	3772790.501	382.07
LOCATION	L0000357	VOLUME	459700.573	3772790.558	382.08
LOCATION	L0000358	VOLUME	459702.572	3772790.614	382.08
LOCATION	L0000359	VOLUME	459704.571	3772790.671	382.08
LOCATION	L0000360	VOLUME	459706.571	3772790.727	382.08
LOCATION	L0000361	VOLUME	459708.570	3772790.784	382.07
LOCATION	L0000362	VOLUME	459710.569	3772790.841	382.07
LOCATION	L0000363	VOLUME	459712.568	3772790.897	382.06
LOCATION	L0000364	VOLUME	459714.567	3772790.954	382.06
LOCATION	L0000365	VOLUME	459716.567	3772791.010	382.05
LOCATION	L0000366	VOLUME	459718.566	3772791.067	382.04
LOCATION	L0000367	VOLUME	459720.565	3772791.123	382.04
LOCATION	L0000368	VOLUME	459722.564	3772791.180	382.03
LOCATION	L0000369	VOLUME	459724.563	3772791.236	382.02
LOCATION	L0000370	VOLUME	459726.563	3772791.293	382.02
LOCATION	L0000371	VOLUME	459728.562	3772791.350	382.01
LOCATION	L0000372	VOLUME	459730.561	3772791.406	382.00
LOCATION	L0000373	VOLUME	459732.560	3772791.463	382.00
LOCATION	L0000374	VOLUME	459734.559	3772791.519	382.00
LOCATION	L0000375	VOLUME	459736.559	3772791.576	382.00
LOCATION	L0000376	VOLUME	459738.558	3772791.632	382.00
LOCATION	L0000377	VOLUME	459740.557	3772791.689	381.99
LOCATION	L0000378	VOLUME	459742.556	3772791.746	381.99
LOCATION	L0000379	VOLUME	459744.555	3772791.802	381.99
LOCATION	L0000380	VOLUME	459746.555	3772791.859	381.99
LOCATION	L0000381	VOLUME	459748.554	3772791.915	381.99
LOCATION	L0000382	VOLUME	459750.553	3772791.972	381.99

LOCATION	L0000383	VOLUME	459752.552	3772792.028	381.99
LOCATION	L0000384	VOLUME	459754.551	3772792.085	381.99
LOCATION	L0000385	VOLUME	459756.551	3772792.141	381.99
LOCATION	L0000386	VOLUME	459758.550	3772792.198	381.99
LOCATION	L0000387	VOLUME	459760.549	3772792.255	382.00
LOCATION	L0000388	VOLUME	459762.548	3772792.311	382.01
LOCATION	L0000389	VOLUME	459764.547	3772792.368	382.02
LOCATION	L0000390	VOLUME	459766.547	3772792.424	382.04
LOCATION	L0000391	VOLUME	459768.546	3772792.481	382.05
LOCATION	L0000392	VOLUME	459770.545	3772792.537	382.06
LOCATION	L0000393	VOLUME	459772.544	3772792.594	382.07
LOCATION	L0000394	VOLUME	459774.543	3772792.650	382.08
LOCATION	L0000395	VOLUME	459776.543	3772792.707	382.09
LOCATION	L0000396	VOLUME	459778.542	3772792.764	382.11
LOCATION	L0000397	VOLUME	459780.541	3772792.820	382.12
LOCATION	L0000398	VOLUME	459782.540	3772792.877	382.13
LOCATION	L0000399	VOLUME	459784.539	3772792.933	382.14
LOCATION	L0000400	VOLUME	459786.539	3772792.990	382.15
LOCATION	L0000401	VOLUME	459788.538	3772793.046	382.15
LOCATION	L0000402	VOLUME	459790.537	3772793.103	382.16
LOCATION	L0000403	VOLUME	459792.536	3772793.160	382.17
LOCATION	L0000404	VOLUME	459794.535	3772793.216	382.17
LOCATION	L0000405	VOLUME	459796.535	3772793.273	382.18
LOCATION	L0000406	VOLUME	459798.534	3772793.329	382.19
LOCATION	L0000407	VOLUME	459800.533	3772793.386	382.19
LOCATION	L0000408	VOLUME	459802.532	3772793.442	382.20
LOCATION	L0000409	VOLUME	459804.531	3772793.499	382.21
LOCATION	L0000410	VOLUME	459806.531	3772793.555	382.21
LOCATION	L0000411	VOLUME	459808.530	3772793.612	382.22
LOCATION	L0000412	VOLUME	459810.529	3772793.669	382.22
LOCATION	L0000413	VOLUME	459812.528	3772793.725	382.21
LOCATION	L0000414	VOLUME	459814.527	3772793.782	382.21
LOCATION	L0000415	VOLUME	459816.527	3772793.838	382.20
LOCATION	L0000416	VOLUME	459818.526	3772793.895	382.19
LOCATION	L0000417	VOLUME	459820.525	3772793.951	382.19
LOCATION	L0000418	VOLUME	459822.524	3772794.008	382.18
LOCATION	L0000419	VOLUME	459824.523	3772794.065	382.18
LOCATION	L0000420	VOLUME	459826.523	3772794.121	382.17
LOCATION	L0000421	VOLUME	459828.522	3772794.178	382.17
LOCATION	L0000422	VOLUME	459830.521	3772794.234	382.17
LOCATION	L0000423	VOLUME	459832.520	3772794.291	382.16
LOCATION	L0000424	VOLUME	459834.519	3772794.347	382.16
LOCATION	L0000425	VOLUME	459836.519	3772794.404	382.15
LOCATION	L0000426	VOLUME	459838.518	3772794.460	382.15
LOCATION	L0000427	VOLUME	459840.517	3772794.517	382.15
LOCATION	L0000428	VOLUME	459842.516	3772794.574	382.15
LOCATION	L0000429	VOLUME	459844.515	3772794.630	382.15
LOCATION	L0000430	VOLUME	459846.515	3772794.687	382.14

LOCATION	L0000431	VOLUME	459848.514	3772794.743	382.14
LOCATION	L0000432	VOLUME	459850.513	3772794.800	382.14
LOCATION	L0000433	VOLUME	459852.512	3772794.856	382.14
LOCATION	L0000434	VOLUME	459854.511	3772794.913	382.14
LOCATION	L0000435	VOLUME	459856.511	3772794.969	382.13
LOCATION	L0000436	VOLUME	459858.510	3772795.026	382.13
LOCATION	L0000437	VOLUME	459860.509	3772795.083	382.13
LOCATION	L0000438	VOLUME	459862.508	3772795.139	382.13
LOCATION	L0000439	VOLUME	459864.507	3772795.196	382.14
LOCATION	L0000440	VOLUME	459866.507	3772795.252	382.15
LOCATION	L0000441	VOLUME	459868.506	3772795.309	382.15
LOCATION	L0000442	VOLUME	459870.505	3772795.365	382.16
LOCATION	L0000443	VOLUME	459872.504	3772795.422	382.16
LOCATION	L0000444	VOLUME	459874.503	3772795.479	382.17
LOCATION	L0000445	VOLUME	459876.503	3772795.535	382.17
LOCATION	L0000446	VOLUME	459878.502	3772795.592	382.18
LOCATION	L0000447	VOLUME	459880.501	3772795.648	382.18
LOCATION	L0000448	VOLUME	459882.500	3772795.705	382.19
LOCATION	L0000449	VOLUME	459884.499	3772795.761	382.19
LOCATION	L0000450	VOLUME	459886.499	3772795.818	382.20
LOCATION	L0000451	VOLUME	459888.498	3772795.874	382.20
LOCATION	L0000452	VOLUME	459890.497	3772795.931	382.21
LOCATION	L0000453	VOLUME	459892.496	3772795.988	382.22
LOCATION	L0000454	VOLUME	459894.495	3772796.044	382.23
LOCATION	L0000455	VOLUME	459896.495	3772796.101	382.24
LOCATION	L0000456	VOLUME	459898.494	3772796.157	382.25
LOCATION	L0000457	VOLUME	459900.493	3772796.214	382.26
LOCATION	L0000458	VOLUME	459902.492	3772796.270	382.27
LOCATION	L0000459	VOLUME	459904.491	3772796.327	382.27
LOCATION	L0000460	VOLUME	459906.491	3772796.383	382.28
LOCATION	L0000461	VOLUME	459908.490	3772796.440	382.29
LOCATION	L0000462	VOLUME	459910.489	3772796.497	382.30
LOCATION	L0000463	VOLUME	459912.488	3772796.553	382.31
LOCATION	L0000464	VOLUME	459914.487	3772796.610	382.32
LOCATION	L0000465	VOLUME	459916.487	3772796.666	382.34
LOCATION	L0000466	VOLUME	459918.486	3772796.723	382.35
LOCATION	L0000467	VOLUME	459920.485	3772796.779	382.36
LOCATION	L0000468	VOLUME	459922.484	3772796.836	382.37
LOCATION	L0000469	VOLUME	459924.483	3772796.893	382.39
LOCATION	L0000470	VOLUME	459926.483	3772796.949	382.40
LOCATION	L0000471	VOLUME	459928.482	3772797.006	382.41
LOCATION	L0000472	VOLUME	459930.481	3772797.062	382.43
LOCATION	L0000473	VOLUME	459932.480	3772797.119	382.44
LOCATION	L0000474	VOLUME	459934.479	3772797.175	382.45
LOCATION	L0000475	VOLUME	459936.479	3772797.232	382.46
LOCATION	L0000476	VOLUME	459938.478	3772797.288	382.48
LOCATION	L0000477	VOLUME	459940.477	3772797.345	382.49
LOCATION	L0000478	VOLUME	459942.476	3772797.402	382.51

LOCATION	L0000479	VOLUME	459944.475	3772797.458	382.52
LOCATION	L0000480	VOLUME	459946.475	3772797.515	382.54
LOCATION	L0000481	VOLUME	459948.474	3772797.571	382.55
LOCATION	L0000482	VOLUME	459950.473	3772797.628	382.57
LOCATION	L0000483	VOLUME	459952.472	3772797.684	382.58
LOCATION	L0000484	VOLUME	459954.471	3772797.741	382.60
LOCATION	L0000485	VOLUME	459956.471	3772797.798	382.61
LOCATION	L0000486	VOLUME	459958.470	3772797.854	382.63
LOCATION	L0000487	VOLUME	459960.469	3772797.911	382.65
LOCATION	L0000488	VOLUME	459962.468	3772797.967	382.66
LOCATION	L0000489	VOLUME	459964.467	3772798.024	382.68
LOCATION	L0000490	VOLUME	459966.467	3772798.080	382.70
LOCATION	L0000491	VOLUME	459968.466	3772798.137	382.72
LOCATION	L0000492	VOLUME	459970.465	3772798.193	382.73
LOCATION	L0000493	VOLUME	459972.464	3772798.250	382.75
LOCATION	L0000494	VOLUME	459974.463	3772798.307	382.77
LOCATION	L0000495	VOLUME	459976.463	3772798.363	382.79
LOCATION	L0000496	VOLUME	459978.462	3772798.420	382.81
LOCATION	L0000497	VOLUME	459980.461	3772798.476	382.83
LOCATION	L0000498	VOLUME	459982.460	3772798.533	382.85
LOCATION	L0000499	VOLUME	459984.459	3772798.589	382.86
LOCATION	L0000500	VOLUME	459986.459	3772798.646	382.88
LOCATION	L0000501	VOLUME	459988.458	3772798.702	382.90
LOCATION	L0000502	VOLUME	459990.457	3772798.759	382.91
LOCATION	L0000503	VOLUME	459992.456	3772798.816	382.93
LOCATION	L0000504	VOLUME	459994.455	3772798.872	382.94
LOCATION	L0000505	VOLUME	459996.455	3772798.929	382.95
LOCATION	L0000506	VOLUME	459998.454	3772798.985	382.96
LOCATION	L0000507	VOLUME	460000.453	3772799.042	382.97
LOCATION	L0000508	VOLUME	460002.452	3772799.098	382.98
LOCATION	L0000509	VOLUME	460004.451	3772799.155	382.99
LOCATION	L0000510	VOLUME	460006.451	3772799.212	383.01
LOCATION	L0000511	VOLUME	460008.450	3772799.268	383.02
LOCATION	L0000512	VOLUME	460010.449	3772799.325	383.03
LOCATION	L0000513	VOLUME	460012.448	3772799.381	383.04
LOCATION	L0000514	VOLUME	460014.447	3772799.438	383.05
LOCATION	L0000515	VOLUME	460016.447	3772799.494	383.06
LOCATION	L0000516	VOLUME	460018.446	3772799.551	383.07
LOCATION	L0000517	VOLUME	460020.445	3772799.607	383.07
LOCATION	L0000518	VOLUME	460022.444	3772799.664	383.08
LOCATION	L0000519	VOLUME	460024.443	3772799.721	383.09
LOCATION	L0000520	VOLUME	460026.443	3772799.777	383.10
LOCATION	L0000521	VOLUME	460028.442	3772799.834	383.11
LOCATION	L0000522	VOLUME	460030.441	3772799.890	383.11
LOCATION	L0000523	VOLUME	460032.440	3772799.947	383.12
LOCATION	L0000524	VOLUME	460034.439	3772800.003	383.13
LOCATION	L0000525	VOLUME	460036.439	3772800.060	383.14
LOCATION	L0000526	VOLUME	460038.438	3772800.116	383.14

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LOCATION L0000527     VOLUME   460040.437 3772800.173 383.15
LOCATION L0000528     VOLUME   460042.436 3772800.230 383.16
LOCATION L0000529     VOLUME   460044.435 3772800.286 383.16
LOCATION L0000530     VOLUME   460046.435 3772800.343 383.17
LOCATION L0000531     VOLUME   460048.434 3772800.399 383.17
LOCATION L0000532     VOLUME   460050.433 3772800.456 383.17
LOCATION L0000533     VOLUME   460052.432 3772800.512 383.18
LOCATION L0000534     VOLUME   460054.431 3772800.569 383.18
LOCATION L0000535     VOLUME   460056.431 3772800.626 383.19
LOCATION L0000536     VOLUME   460058.430 3772800.682 383.19
LOCATION L0000537     VOLUME   460060.429 3772800.739 383.20
LOCATION L0000538     VOLUME   460062.428 3772800.795 383.20
LOCATION L0000539     VOLUME   460064.427 3772800.852 383.21
LOCATION L0000540     VOLUME   460066.427 3772800.908 383.21
LOCATION L0000541     VOLUME   460068.426 3772800.965 383.20
LOCATION L0000542     VOLUME   460070.425 3772801.021 383.19
LOCATION L0000543     VOLUME   460072.424 3772801.078 383.18
LOCATION L0000544     VOLUME   460074.423 3772801.135 383.17
LOCATION L0000545     VOLUME   460076.423 3772801.191 383.16
LOCATION L0000546     VOLUME   460078.422 3772801.248 383.15
LOCATION L0000547     VOLUME   460080.421 3772801.304 383.14
LOCATION L0000548     VOLUME   460082.420 3772801.361 383.13
LOCATION L0000549     VOLUME   460084.419 3772801.417 383.12
LOCATION L0000550     VOLUME   460086.419 3772801.474 383.11
LOCATION L0000551     VOLUME   460088.418 3772801.531 383.10
LOCATION L0000552     VOLUME   460090.417 3772801.587 383.09
LOCATION L0000553     VOLUME   460092.416 3772801.644 383.09
LOCATION L0000554     VOLUME   460094.415 3772801.700 383.09
LOCATION L0000555     VOLUME   460096.415 3772801.757 383.10
LOCATION L0000556     VOLUME   460098.414 3772801.813 383.10
LOCATION L0000557     VOLUME   460100.413 3772801.870 383.10
LOCATION L0000558     VOLUME   460102.412 3772801.926 383.11
LOCATION L0000559     VOLUME   460104.411 3772801.983 383.11
LOCATION L0000560     VOLUME   460106.411 3772802.040 383.11
LOCATION L0000561     VOLUME   460108.410 3772802.096 383.12
LOCATION L0000562     VOLUME   460110.409 3772802.153 383.12
LOCATION L0000563     VOLUME   460112.408 3772802.209 383.12
LOCATION L0000564     VOLUME   460114.407 3772802.266 383.13
LOCATION L0000565     VOLUME   460116.407 3772802.322 383.13
LOCATION L0000566     VOLUME   460118.406 3772802.379 383.14
LOCATION L0000567     VOLUME   460120.405 3772802.435 383.15
LOCATION L0000568     VOLUME   460122.404 3772802.492 383.16
LOCATION L0000569     VOLUME   460124.403 3772802.549 383.16
LOCATION L0000570     VOLUME   460126.403 3772802.605 383.17
LOCATION L0000571     VOLUME   460128.402 3772802.662 383.18
LOCATION L0000572     VOLUME   460130.401 3772802.718 383.19
LOCATION L0000573     VOLUME   460132.400 3772802.775 383.20
LOCATION L0000574     VOLUME   460134.399 3772802.831 383.21
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LOCATION	L0000575	VOLUME	460136.399	3772802.888	383.22
LOCATION	L0000576	VOLUME	460138.398	3772802.945	383.23
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LOCATION	L0000578	VOLUME	460142.396	3772803.058	383.24
LOCATION	L0000579	VOLUME	460144.395	3772803.114	383.25
LOCATION	L0000580	VOLUME	460146.395	3772803.171	383.25
LOCATION	L0000581	VOLUME	460148.394	3772803.227	383.25
LOCATION	L0000582	VOLUME	460150.393	3772803.284	383.25
LOCATION	L0000583	VOLUME	460152.392	3772803.340	383.25
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LOCATION	L0000587	VOLUME	460160.389	3772803.567	383.26
LOCATION	L0000588	VOLUME	460162.388	3772803.623	383.26
LOCATION	L0000589	VOLUME	460164.387	3772803.680	383.26
LOCATION	L0000590	VOLUME	460166.387	3772803.736	383.26
LOCATION	L0000591	VOLUME	460168.386	3772803.793	383.27
LOCATION	L0000592	VOLUME	460170.385	3772803.849	383.27
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LOCATION	L0000618	VOLUME	460222.364	3772805.320	383.25
LOCATION	L0000619	VOLUME	460224.363	3772805.377	383.25
LOCATION	L0000620	VOLUME	460226.363	3772805.433	383.25
LOCATION	L0000621	VOLUME	460228.362	3772805.490	383.25
LOCATION	L0000622	VOLUME	460230.361	3772805.546	383.25

LOCATION	L0000623	VOLUME	460232.360	3772805.603	383.25
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LOCATION	L0000626	VOLUME	460238.358	3772805.773	383.25
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LOCATION	L0000631	VOLUME	460248.354	3772806.055	383.24
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LOCATION	L0000633	VOLUME	460252.352	3772806.168	383.23
LOCATION	L0000634	VOLUME	460254.351	3772806.225	383.22
LOCATION	L0000635	VOLUME	460256.351	3772806.282	383.22
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LOCATION	L0000637	VOLUME	460260.349	3772806.395	383.21
LOCATION	L0000638	VOLUME	460262.348	3772806.451	383.21
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LOCATION	L0000640	VOLUME	460266.347	3772806.564	383.20
LOCATION	L0000641	VOLUME	460268.346	3772806.621	383.20
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LOCATION	L0000643	VOLUME	460272.344	3772806.734	383.20
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LOCATION	L0000646	VOLUME	460278.342	3772806.904	383.21
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LOCATION	L0000652	VOLUME	460290.337	3772807.243	383.24
LOCATION	L0000653	VOLUME	460292.336	3772807.300	383.24
LOCATION	L0000654	VOLUME	460294.335	3772807.356	383.25
LOCATION	L0000655	VOLUME	460296.335	3772807.413	383.25
LOCATION	L0000656	VOLUME	460298.334	3772807.469	383.25
LOCATION	L0000657	VOLUME	460300.333	3772807.526	383.24
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LOCATION	L0000661	VOLUME	460308.330	3772807.752	383.22
LOCATION	L0000662	VOLUME	460310.329	3772807.809	383.21
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LOCATION	L0000667	VOLUME	460320.325	3772808.092	383.18
LOCATION	L0000668	VOLUME	460322.324	3772808.148	383.18
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LOCATION	L0000670	VOLUME	460326.323	3772808.261	383.16

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LOCATION	L0000672	VOLUME	460330.321	3772808.374	383.14
LOCATION	L0000673	VOLUME	460332.320	3772808.431	383.13
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LOCATION	L0000685	VOLUME	460356.311	3772809.110	382.92
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LOCATION	L0000687	VOLUME	460360.309	3772809.223	382.86
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LOCATION	L0000689	VOLUME	460364.307	3772809.336	382.79
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LOCATION	L0000695	VOLUME	460376.303	3772809.675	382.60
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LOCATION	L0000697	VOLUME	460380.301	3772809.788	382.53
LOCATION	L0000698	VOLUME	460382.300	3772809.845	382.50
LOCATION	L0000699	VOLUME	460384.299	3772809.901	382.47
LOCATION	L0000700	VOLUME	460386.299	3772809.958	382.44
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LOCATION	L0000708	VOLUME	460402.292	3772810.411	382.21
LOCATION	L0000709	VOLUME	460404.291	3772810.467	382.20
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LOCATION	L0000711	VOLUME	460408.290	3772810.580	382.17
LOCATION	L0000712	VOLUME	460410.289	3772810.637	382.16
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LOCATION	L0000715	VOLUME	460416.287	3772810.806	382.12
LOCATION	L0000716	VOLUME	460418.286	3772810.863	382.11
LOCATION	L0000717	VOLUME	460420.285	3772810.920	382.10
LOCATION	L0000718	VOLUME	460422.284	3772810.976	382.09

LOCATION	L0000719	VOLUME	460424.283	3772811.033	382.07
LOCATION	L0000720	VOLUME	460426.283	3772811.089	382.07
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LOCATION	L0000723	VOLUME	460432.280	3772811.259	382.07
LOCATION	L0000724	VOLUME	460434.279	3772811.316	382.07
LOCATION	L0000725	VOLUME	460436.279	3772811.372	382.07
LOCATION	L0000726	VOLUME	460438.278	3772811.429	382.07
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LOCATION	L0000735	VOLUME	460456.271	3772811.938	382.09
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LOCATION	L0000737	VOLUME	460460.269	3772812.051	382.10
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LOCATION	L0000741	VOLUME	460468.266	3772812.277	382.13
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LOCATION	L0000749	VOLUME	460484.259	3772812.730	382.19
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LOCATION	L0000762	VOLUME	460510.249	3772813.465	382.29
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LOCATION	L0000766	VOLUME	460518.246	3772813.691	382.30

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LOCATION	L0000768	VOLUME	460522.244	3772813.804	382.31
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LOCATION	L0000792	VOLUME	460570.225	3772815.162	382.32
LOCATION	L0000793	VOLUME	460572.224	3772815.218	382.33
LOCATION	L0000794	VOLUME	460574.223	3772815.275	382.33
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LOCATION	L0000807	VOLUME	460600.213	3772816.010	382.35
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LOCATION	L0000809	VOLUME	460604.211	3772816.123	382.35
LOCATION	L0000810	VOLUME	460606.211	3772816.180	382.34
LOCATION	L0000811	VOLUME	460608.210	3772816.236	382.32
LOCATION	L0000812	VOLUME	460610.209	3772816.293	382.30
LOCATION	L0000813	VOLUME	460612.208	3772816.349	382.29
LOCATION	L0000814	VOLUME	460614.207	3772816.406	382.27

LOCATION	L0000815	VOLUME	460616.207	3772816.463	382.26
LOCATION	L0000816	VOLUME	460618.206	3772816.519	382.24
LOCATION	L0000817	VOLUME	460620.205	3772816.576	382.23
LOCATION	L0000818	VOLUME	460622.204	3772816.632	382.21
LOCATION	L0000819	VOLUME	460624.203	3772816.689	382.20
LOCATION	L0000820	VOLUME	460626.203	3772816.745	382.18
LOCATION	L0000821	VOLUME	460628.202	3772816.802	382.17
LOCATION	L0000822	VOLUME	460630.201	3772816.858	382.16
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LOCATION	L0000824	VOLUME	460634.199	3772816.972	382.13
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LOCATION	L0000827	VOLUME	460640.197	3772817.141	382.10
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LOCATION	L0000829	VOLUME	460644.195	3772817.254	382.08
LOCATION	L0000830	VOLUME	460646.195	3772817.311	382.07
LOCATION	L0000831	VOLUME	460648.194	3772817.367	382.06
LOCATION	L0000832	VOLUME	460650.193	3772817.424	382.05
LOCATION	L0000833	VOLUME	460652.192	3772817.481	382.04
LOCATION	L0000834	VOLUME	460654.191	3772817.537	382.03
LOCATION	L0000835	VOLUME	460656.191	3772817.594	382.03
LOCATION	L0000836	VOLUME	460658.190	3772817.650	382.02
LOCATION	L0000837	VOLUME	460660.189	3772817.707	382.02
LOCATION	L0000838	VOLUME	460662.188	3772817.763	382.02
LOCATION	L0000839	VOLUME	460664.187	3772817.820	382.01
LOCATION	L0000840	VOLUME	460666.187	3772817.877	382.01
LOCATION	L0000841	VOLUME	460668.186	3772817.933	382.00
LOCATION	L0000842	VOLUME	460670.185	3772817.990	382.00
LOCATION	L0000843	VOLUME	460672.184	3772818.046	381.99
LOCATION	L0000844	VOLUME	460674.183	3772818.103	381.99
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LOCATION	L0000848	VOLUME	460682.180	3772818.329	381.97
LOCATION	L0000849	VOLUME	460684.179	3772818.386	381.96
LOCATION	L0000850	VOLUME	460686.179	3772818.442	381.96
LOCATION	L0000851	VOLUME	460688.178	3772818.499	381.96
LOCATION	L0000852	VOLUME	460690.177	3772818.555	381.95
LOCATION	L0000853	VOLUME	460692.176	3772818.612	381.95
LOCATION	L0000854	VOLUME	460694.175	3772818.668	381.95
LOCATION	L0000855	VOLUME	460696.175	3772818.725	381.94
LOCATION	L0000856	VOLUME	460698.174	3772818.782	381.94
LOCATION	L0000857	VOLUME	460700.173	3772818.838	381.94
LOCATION	L0000858	VOLUME	460702.172	3772818.895	381.93
LOCATION	L0000859	VOLUME	460704.171	3772818.951	381.93
LOCATION	L0000860	VOLUME	460706.171	3772819.008	381.92
LOCATION	L0000861	VOLUME	460708.170	3772819.064	381.92
LOCATION	L0000862	VOLUME	460710.169	3772819.121	381.93

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LOCATION L0000863     VOLUME   460712.168 3772819.177 381.93
LOCATION L0000864     VOLUME   460714.167 3772819.234 381.93
LOCATION L0000865     VOLUME   460716.167 3772819.291 381.93
LOCATION L0000866     VOLUME   460718.166 3772819.347 381.93
LOCATION L0000867     VOLUME   460720.165 3772819.404 381.93
LOCATION L0000868     VOLUME   460722.164 3772819.460 381.93
LOCATION L0000869     VOLUME   460724.163 3772819.517 381.93
LOCATION L0000870     VOLUME   460726.163 3772819.573 381.93
LOCATION L0000871     VOLUME   460728.162 3772819.630 381.93
LOCATION L0000872     VOLUME   460730.161 3772819.686 381.93
LOCATION L0000873     VOLUME   460732.160 3772819.743 381.93
LOCATION L0000874     VOLUME   460734.159 3772819.800 381.93
LOCATION L0000875     VOLUME   460736.159 3772819.856 381.93
LOCATION L0000876     VOLUME   460738.158 3772819.913 381.93
LOCATION L0000877     VOLUME   460740.157 3772819.969 381.93
LOCATION L0000878     VOLUME   460742.156 3772820.026 381.93
LOCATION L0000879     VOLUME   460744.155 3772820.082 381.93
LOCATION L0000880     VOLUME   460746.155 3772820.139 381.93
LOCATION L0000881     VOLUME   460748.154 3772820.196 381.93
LOCATION L0000882     VOLUME   460750.153 3772820.252 381.93
LOCATION L0000883     VOLUME   460752.152 3772820.309 381.93
LOCATION L0000884     VOLUME   460754.151 3772820.365 381.93
LOCATION L0000885     VOLUME   460756.151 3772820.422 381.93
LOCATION L0000886     VOLUME   460758.150 3772820.478 381.93
LOCATION L0000887     VOLUME   460760.149 3772820.535 381.93
LOCATION L0000888     VOLUME   460762.148 3772820.591 381.94
LOCATION L0000889     VOLUME   460764.147 3772820.648 381.94
LOCATION L0000890     VOLUME   460766.147 3772820.705 381.95
LOCATION L0000891     VOLUME   460768.146 3772820.761 381.95
LOCATION L0000892     VOLUME   460770.145 3772820.818 381.96
LOCATION L0000893     VOLUME   460772.144 3772820.874 381.96
LOCATION L0000894     VOLUME   460774.143 3772820.931 381.97
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LOCATION L0000896     VOLUME   460778.142 3772821.044 381.98
LOCATION L0000897     VOLUME   460780.141 3772821.101 381.98
LOCATION L0000898     VOLUME   460782.140 3772821.157 381.99
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LOCATION L0000901     VOLUME   460788.138 3772821.327 382.00
LOCATION L0000902     VOLUME   460790.137 3772821.383 382.01
LOCATION L0000903     VOLUME   460792.136 3772821.440 382.01
LOCATION L0000904     VOLUME   460794.135 3772821.496 382.02
LOCATION L0000905     VOLUME   460796.135 3772821.553 382.02
LOCATION L0000906     VOLUME   460798.134 3772821.610 382.03
LOCATION L0000907     VOLUME   460800.133 3772821.666 382.03
LOCATION L0000908     VOLUME   460802.132 3772821.723 382.04
LOCATION L0000909     VOLUME   460804.131 3772821.779 382.04
LOCATION L0000910     VOLUME   460806.131 3772821.836 382.05
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LOCATION	L0000912	VOLUME	460810.129	3772821.949	382.06
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LOCATION	L0000914	VOLUME	460814.127	3772822.062	382.06
LOCATION	L0000915	VOLUME	460816.127	3772822.119	382.06
LOCATION	L0000916	VOLUME	460818.126	3772822.175	382.06
LOCATION	L0000917	VOLUME	460820.125	3772822.232	382.06
LOCATION	L0000918	VOLUME	460822.124	3772822.288	382.06
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LOCATION	L0000925	VOLUME	460836.119	3772822.684	382.06
LOCATION	L0000926	VOLUME	460838.118	3772822.741	382.07
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LOCATION	L0000932	VOLUME	460850.113	3772823.080	382.08
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LOCATION	L0000940	VOLUME	460866.107	3772823.533	382.09
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LOCATION	L0000942	VOLUME	460870.105	3772823.646	382.09
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LOCATION	L0000957	VOLUME	460900.093	3772824.494	382.10
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LOCATION	L0000959	VOLUME	460904.091	3772824.607	382.10
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LOCATION	L0000990	VOLUME	460966.067	3772826.361	382.05
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LOCATION	L0000997	VOLUME	460980.061	3772826.757	382.06
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LOCATION	L0001001	VOLUME	460988.058	3772826.983	382.07
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LOCATION	L0001003	VOLUME	460992.056	3772827.096	382.09
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LOCATION	L0001006	VOLUME	460998.054	3772827.266	382.12

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LOCATION L0001010     VOLUME   461006.051 3772827.492 382.17
LOCATION L0001011     VOLUME   461008.050 3772827.548 382.18
LOCATION L0001012     VOLUME   461010.049 3772827.605 382.19
LOCATION L0001013     VOLUME   461012.048 3772827.662 382.20
LOCATION L0001014     VOLUME   461014.047 3772827.718 382.21
LOCATION L0001015     VOLUME   461016.047 3772827.775 382.22
LOCATION L0001016     VOLUME   461018.046 3772827.831 382.23
LOCATION L0001017     VOLUME   461020.045 3772827.888 382.24
LOCATION L0001018     VOLUME   461022.044 3772827.944 382.25
LOCATION L0001019     VOLUME   461024.043 3772828.001 382.26
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LOCATION L0001026     VOLUME   461038.038 3772828.397 382.33
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LOCATION L0001036     VOLUME   461058.030 3772828.962 382.36
LOCATION L0001037     VOLUME   461060.029 3772829.019 382.36
LOCATION L0001038     VOLUME   461062.028 3772829.076 382.37
LOCATION L0001039     VOLUME   461064.027 3772829.132 382.37
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LOCATION L0001041     VOLUME   461068.026 3772829.245 382.37
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LOCATION L0001043     VOLUME   461072.024 3772829.358 382.38
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LOCATION L0001046     VOLUME   461078.022 3772829.528 382.38
LOCATION L0001047     VOLUME   461080.021 3772829.585 382.38
LOCATION L0001048     VOLUME   461082.020 3772829.641 382.39
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LOCATION L0001053     VOLUME   461092.016 3772829.924 382.39
LOCATION L0001054     VOLUME   461094.015 3772829.981 382.40
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LOCATION L0001059     VOLUME   461104.011 3772830.263 382.40
LOCATION L0001060     VOLUME   461106.011 3772830.320 382.41
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LOCATION L0001074     VOLUME   461133.999 3772831.112 382.44
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LOCATION L0001076     VOLUME   461137.998 3772831.225 382.45
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LOCATION L0001081     VOLUME   461147.994 3772831.508 382.47
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LOCATION L0001086     VOLUME   461157.990 3772831.790 382.49
LOCATION L0001087     VOLUME   461159.989 3772831.847 382.49
LOCATION L0001088     VOLUME   461161.988 3772831.904 382.50
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LOCATION L0001093     VOLUME   461171.984 3772832.186 382.52
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LOCATION L0001095     VOLUME   461175.983 3772832.300 382.53
LOCATION L0001096     VOLUME   461177.982 3772832.356 382.53
LOCATION L0001097     VOLUME   461179.981 3772832.413 382.53
LOCATION L0001098     VOLUME   461181.980 3772832.469 382.54
LOCATION L0001099     VOLUME   461183.979 3772832.526 382.54
LOCATION L0001100     VOLUME   461185.979 3772832.582 382.55
LOCATION L0001101     VOLUME   461187.978 3772832.639 382.55
LOCATION L0001102     VOLUME   461189.977 3772832.695 382.56
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LOCATION	L0001112	VOLUME	461209.969	3772833.261	382.42
LOCATION	L0001113	VOLUME	461211.968	3772833.318	382.40
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LOCATION	L0001115	VOLUME	461215.967	3772833.431	382.36
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LOCATION	L0001121	VOLUME	461227.962	3772833.770	382.27
LOCATION	L0001122	VOLUME	461229.961	3772833.827	382.26
LOCATION	L0001123	VOLUME	461231.960	3772833.883	382.24
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LOCATION	L0001145	VOLUME	461275.943	3772835.128	382.10
LOCATION	L0001146	VOLUME	461277.942	3772835.184	382.10
LOCATION	L0001147	VOLUME	461279.941	3772835.241	382.10
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LOCATION	L0001150	VOLUME	461285.939	3772835.410	382.08

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LOCATION L0001154     VOLUME   461293.935 3772835.637 382.07
LOCATION L0001155     VOLUME   461295.935 3772835.693 382.06
LOCATION L0001156     VOLUME   461297.934 3772835.750 382.06
LOCATION L0001157     VOLUME   461299.933 3772835.806 382.05
LOCATION L0001158     VOLUME   461301.932 3772835.863 382.05
LOCATION L0001159     VOLUME   461303.931 3772835.919 382.04
LOCATION L0001160     VOLUME   461305.931 3772835.976 382.04
LOCATION L0001161     VOLUME   461307.930 3772836.033 382.03
LOCATION L0001162     VOLUME   461309.929 3772836.089 382.03
LOCATION L0001163     VOLUME   461311.928 3772836.146 382.02
LOCATION L0001164     VOLUME   461313.927 3772836.202 382.02
LOCATION L0001165     VOLUME   461315.927 3772836.259 382.01
LOCATION L0001166     VOLUME   461317.926 3772836.315 382.01
LOCATION L0001167     VOLUME   461319.925 3772836.372 382.00
LOCATION L0001168     VOLUME   461321.924 3772836.428 382.00
LOCATION L0001169     VOLUME   461323.923 3772836.485 381.99
LOCATION L0001170     VOLUME   461325.923 3772836.542 381.98
LOCATION L0001171     VOLUME   461327.922 3772836.598 381.98
LOCATION L0001172     VOLUME   461329.921 3772836.655 381.97
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LOCATION L0001174     VOLUME   461333.919 3772836.768 381.96
LOCATION L0001175     VOLUME   461335.919 3772836.824 381.95
LOCATION L0001176     VOLUME   461337.918 3772836.881 381.94
LOCATION L0001177     VOLUME   461339.917 3772836.937 381.94
LOCATION L0001178     VOLUME   461341.916 3772836.994 381.93
LOCATION L0001179     VOLUME   461343.915 3772837.051 381.92
LOCATION L0001180     VOLUME   461345.915 3772837.107 381.92
LOCATION L0001181     VOLUME   461347.914 3772837.164 381.91
LOCATION L0001182     VOLUME   461349.913 3772837.220 381.91
LOCATION L0001183     VOLUME   461351.912 3772837.277 381.90
LOCATION L0001184     VOLUME   461353.911 3772837.333 381.90
LOCATION L0001185     VOLUME   461355.911 3772837.390 381.90
LOCATION L0001186     VOLUME   461357.910 3772837.447 381.89
LOCATION L0001187     VOLUME   461359.909 3772837.503 381.89
LOCATION L0001188     VOLUME   461361.908 3772837.560 381.88
LOCATION L0001189     VOLUME   461363.907 3772837.616 381.88
LOCATION L0001190     VOLUME   461365.907 3772837.673 381.87
LOCATION L0001191     VOLUME   461367.906 3772837.729 381.87
LOCATION L0001192     VOLUME   461369.905 3772837.786 381.86
LOCATION L0001193     VOLUME   461371.904 3772837.842 381.86
LOCATION L0001194     VOLUME   461373.903 3772837.899 381.86
LOCATION L0001195     VOLUME   461375.903 3772837.956 381.87
LOCATION L0001196     VOLUME   461377.902 3772838.012 381.88
LOCATION L0001197     VOLUME   461379.901 3772838.069 381.89
LOCATION L0001198     VOLUME   461381.900 3772838.125 381.89
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LOCATION	L0001202	VOLUME	461389.897	3772838.352	381.92
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LOCATION	L0001211	VOLUME	461407.890	3772838.861	381.86
LOCATION	L0001212	VOLUME	461409.889	3772838.917	381.84
LOCATION	L0001213	VOLUME	461411.888	3772838.974	381.82
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LOCATION	L0001226	VOLUME	461437.878	3772839.709	381.51
LOCATION	L0001227	VOLUME	461439.877	3772839.766	381.48
LOCATION	L0001228	VOLUME	461441.876	3772839.822	381.45
LOCATION	L0001229	VOLUME	461443.875	3772839.879	381.42
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LOCATION L0001257     VOLUME   461499.853 3772841.462 381.38
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LOCATION L0001271     VOLUME   461527.842 3772842.254 381.32
LOCATION L0001272     VOLUME   461529.841 3772842.311 381.31
LOCATION L0001273     VOLUME   461531.840 3772842.367 381.30
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LOCATION L0001284     VOLUME   461553.831 3772842.989 381.25
LOCATION L0001285     VOLUME   461555.831 3772843.046 381.25
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LOCATION L0001313     VOLUME   461611.808 3772844.630 381.18
LOCATION L0001314     VOLUME   461613.807 3772844.686 381.18
LOCATION L0001315     VOLUME   461615.807 3772844.743 381.17
LOCATION L0001316     VOLUME   461617.806 3772844.799 381.17
LOCATION L0001317     VOLUME   461619.805 3772844.856 381.17
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LOCATION L0001320     VOLUME   461625.803 3772845.026 381.16
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LOCATION L0001322     VOLUME   461629.801 3772845.139 381.15
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LOCATION L0001332     VOLUME   461649.793 3772845.704 381.11
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LOCATION	L0001362	VOLUME	461709.769	3772847.401	381.12
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LOCATION	L0001378	VOLUME	461741.756	3772848.306	381.09
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LOCATION L0001431     VOLUME   461847.714 3772851.304 381.09
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LOCATION L0001444     VOLUME   461873.703 3772852.039 381.15
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LOCATION L0001466     VOLUME   461917.686 3772853.284 381.20
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LOCATION L0001468     VOLUME   461921.684 3772853.397 381.20
LOCATION L0001469     VOLUME   461923.683 3772853.453 381.20
LOCATION L0001470     VOLUME   461925.683 3772853.510 381.20
LOCATION L0001471     VOLUME   461927.682 3772853.566 381.20
LOCATION L0001472     VOLUME   461929.681 3772853.623 381.20
LOCATION L0001473     VOLUME   461931.680 3772853.679 381.20
LOCATION L0001474     VOLUME   461933.679 3772853.736 381.20
LOCATION L0001475     VOLUME   461935.679 3772853.793 381.20
LOCATION L0001476     VOLUME   461937.678 3772853.849 381.20
LOCATION L0001477     VOLUME   461939.677 3772853.906 381.20
LOCATION L0001478     VOLUME   461941.676 3772853.962 381.20
LOCATION L0001479     VOLUME   461943.675 3772854.019 381.20
LOCATION L0001480     VOLUME   461945.675 3772854.075 381.21
LOCATION L0001481     VOLUME   461947.674 3772854.132 381.21
LOCATION L0001482     VOLUME   461949.673 3772854.188 381.21
LOCATION L0001483     VOLUME   461951.672 3772854.245 381.21
LOCATION L0001484     VOLUME   461953.671 3772854.302 381.21
LOCATION L0001485     VOLUME   461955.671 3772854.358 381.22
LOCATION L0001486     VOLUME   461957.670 3772854.415 381.22
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LOCATION	L0001487	VOLUME	461959.669	3772854.471	381.22
LOCATION	L0001488	VOLUME	461961.668	3772854.528	381.22
LOCATION	L0001489	VOLUME	461963.667	3772854.584	381.22
LOCATION	L0001490	VOLUME	461965.667	3772854.641	381.21
LOCATION	L0001491	VOLUME	461967.666	3772854.698	381.20
LOCATION	L0001492	VOLUME	461969.665	3772854.754	381.20
LOCATION	L0001493	VOLUME	461971.664	3772854.811	381.19
LOCATION	L0001494	VOLUME	461973.663	3772854.867	381.18
LOCATION	L0001495	VOLUME	461975.663	3772854.924	381.17
LOCATION	L0001496	VOLUME	461977.662	3772854.980	381.17
LOCATION	L0001497	VOLUME	461979.661	3772855.037	381.16
LOCATION	L0001498	VOLUME	461981.660	3772855.093	381.15
LOCATION	L0001499	VOLUME	461983.659	3772855.150	381.14
LOCATION	L0001500	VOLUME	461985.659	3772855.207	381.13
LOCATION	L0001501	VOLUME	461987.658	3772855.263	381.13
LOCATION	L0001502	VOLUME	461989.657	3772855.320	381.10
LOCATION	L0001503	VOLUME	461991.656	3772855.376	381.08
LOCATION	L0001504	VOLUME	461993.655	3772855.433	381.06
LOCATION	L0001505	VOLUME	461995.655	3772855.489	381.04
LOCATION	L0001506	VOLUME	461997.654	3772855.546	381.02
LOCATION	L0001507	VOLUME	461999.653	3772855.603	381.00
LOCATION	L0001508	VOLUME	462001.652	3772855.659	380.97
LOCATION	L0001509	VOLUME	462003.651	3772855.716	380.95
LOCATION	L0001510	VOLUME	462005.651	3772855.772	380.93
LOCATION	L0001511	VOLUME	462007.650	3772855.829	380.91
LOCATION	L0001512	VOLUME	462009.649	3772855.885	380.88
LOCATION	L0001513	VOLUME	462011.648	3772855.942	380.86
LOCATION	L0001514	VOLUME	462013.647	3772855.998	380.84
LOCATION	L0001515	VOLUME	462015.647	3772856.055	380.82
LOCATION	L0001516	VOLUME	462017.646	3772856.112	380.80
LOCATION	L0001517	VOLUME	462019.645	3772856.168	380.78
LOCATION	L0001518	VOLUME	462021.644	3772856.225	380.76
LOCATION	L0001519	VOLUME	462023.643	3772856.281	380.74
LOCATION	L0001520	VOLUME	462025.643	3772856.338	380.72
LOCATION	L0001521	VOLUME	462027.642	3772856.394	380.70
LOCATION	L0001522	VOLUME	462029.641	3772856.451	380.68
LOCATION	L0001523	VOLUME	462031.640	3772856.507	380.65
LOCATION	L0001524	VOLUME	462033.639	3772856.564	380.63
LOCATION	L0001525	VOLUME	462035.639	3772856.621	380.61
LOCATION	L0001526	VOLUME	462037.638	3772856.677	380.59
LOCATION	L0001527	VOLUME	462039.637	3772856.734	380.57
LOCATION	L0001528	VOLUME	462041.636	3772856.790	380.57
LOCATION	L0001529	VOLUME	462043.635	3772856.847	380.56
LOCATION	L0001530	VOLUME	462045.635	3772856.903	380.55
LOCATION	L0001531	VOLUME	462047.634	3772856.960	380.54
LOCATION	L0001532	VOLUME	462049.633	3772857.017	380.53
LOCATION	L0001533	VOLUME	462051.632	3772857.073	380.52
LOCATION	L0001534	VOLUME	462053.631	3772857.130	380.51

LOCATION	L0001535	VOLUME	462055.631	3772857.186	380.50
LOCATION	L0001536	VOLUME	462057.630	3772857.243	380.49
LOCATION	L0001537	VOLUME	462059.629	3772857.299	380.48
LOCATION	L0001538	VOLUME	462061.628	3772857.356	380.47
LOCATION	L0001539	VOLUME	462063.627	3772857.412	380.47
LOCATION	L0001540	VOLUME	462065.627	3772857.469	380.46
LOCATION	L0001541	VOLUME	462067.626	3772857.526	380.46
LOCATION	L0001542	VOLUME	462069.625	3772857.582	380.45
LOCATION	L0001543	VOLUME	462071.624	3772857.639	380.45
LOCATION	L0001544	VOLUME	462073.623	3772857.695	380.45
LOCATION	L0001545	VOLUME	462075.623	3772857.752	380.44
LOCATION	L0001546	VOLUME	462077.622	3772857.808	380.44
LOCATION	L0001547	VOLUME	462079.621	3772857.865	380.44
LOCATION	L0001548	VOLUME	462081.620	3772857.921	380.43
LOCATION	L0001549	VOLUME	462083.620	3772857.978	380.43
LOCATION	L0001550	VOLUME	462085.619	3772858.035	380.43
LOCATION	L0001551	VOLUME	462087.618	3772858.091	380.42
LOCATION	L0001552	VOLUME	462089.617	3772858.148	380.42
LOCATION	L0001553	VOLUME	462091.616	3772858.204	380.42
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LOCATION	L0001560	VOLUME	462105.611	3772858.600	380.41
LOCATION	L0001561	VOLUME	462107.610	3772858.657	380.40
LOCATION	L0001562	VOLUME	462109.609	3772858.713	380.40
LOCATION	L0001563	VOLUME	462111.608	3772858.770	380.40
LOCATION	L0001564	VOLUME	462113.608	3772858.826	380.40
LOCATION	L0001565	VOLUME	462115.607	3772858.883	380.40
LOCATION	L0001566	VOLUME	462117.606	3772858.940	380.40
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LOCATION	L0001573	VOLUME	462131.600	3772859.336	380.43
LOCATION	L0001574	VOLUME	462133.600	3772859.392	380.43
LOCATION	L0001575	VOLUME	462135.599	3772859.449	380.43
LOCATION	L0001576	VOLUME	462137.598	3772859.505	380.44
LOCATION	L0001577	VOLUME	462139.597	3772859.562	380.44
LOCATION	L0001578	VOLUME	462141.596	3772859.618	380.45
LOCATION	L0001579	VOLUME	462143.596	3772859.675	380.46
LOCATION	L0001580	VOLUME	462145.595	3772859.731	380.47
LOCATION	L0001581	VOLUME	462147.594	3772859.788	380.48
LOCATION	L0001582	VOLUME	462149.593	3772859.845	380.49

LOCATION	L0001583	VOLUME	462151.592	3772859.901	380.50
LOCATION	L0001584	VOLUME	462153.592	3772859.958	380.52
LOCATION	L0001585	VOLUME	462155.591	3772860.014	380.53
LOCATION	L0001586	VOLUME	462157.590	3772860.071	380.54
LOCATION	L0001587	VOLUME	462159.589	3772860.127	380.55
LOCATION	L0001588	VOLUME	462161.588	3772860.184	380.56
LOCATION	L0001589	VOLUME	462163.588	3772860.240	380.57
LOCATION	L0001590	VOLUME	462165.587	3772860.297	380.59
LOCATION	L0001591	VOLUME	462167.586	3772860.354	380.60
LOCATION	L0001592	VOLUME	462169.585	3772860.410	380.61
LOCATION	L0001593	VOLUME	462171.584	3772860.467	380.63
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LOCATION	L0001596	VOLUME	462177.582	3772860.636	380.67
LOCATION	L0001597	VOLUME	462179.581	3772860.693	380.68
LOCATION	L0001598	VOLUME	462181.580	3772860.750	380.70
LOCATION	L0001599	VOLUME	462183.580	3772860.806	380.71
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LOCATION	L0001603	VOLUME	462191.576	3772861.032	380.76
LOCATION	L0001604	VOLUME	462193.576	3772861.089	380.77
LOCATION	L0001605	VOLUME	462195.575	3772861.145	380.77
LOCATION	L0001606	VOLUME	462197.574	3772861.202	380.77
LOCATION	L0001607	VOLUME	462199.573	3772861.259	380.77
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LOCATION	L0001616	VOLUME	462217.566	3772861.768	380.77
LOCATION	L0001617	VOLUME	462219.565	3772861.824	380.76
LOCATION	L0001618	VOLUME	462221.564	3772861.881	380.74
LOCATION	L0001619	VOLUME	462223.564	3772861.937	380.73
LOCATION	L0001620	VOLUME	462225.563	3772861.994	380.72
LOCATION	L0001621	VOLUME	462227.562	3772862.050	380.71
LOCATION	L0001622	VOLUME	462229.561	3772862.107	380.69
LOCATION	L0001623	VOLUME	462231.560	3772862.164	380.68
LOCATION	L0001624	VOLUME	462233.560	3772862.220	380.67
LOCATION	L0001625	VOLUME	462235.559	3772862.277	380.65
LOCATION	L0001626	VOLUME	462237.558	3772862.333	380.64
LOCATION	L0001627	VOLUME	462239.557	3772862.390	380.63
LOCATION	L0001628	VOLUME	462241.556	3772862.446	380.61
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LOCATION	L0001630	VOLUME	462245.555	3772862.559	380.60

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LOCATION L0001632     VOLUME   462249.553 3772862.673 380.59
LOCATION L0001633     VOLUME   462251.552 3772862.729 380.58
LOCATION L0001634     VOLUME   462253.552 3772862.786 380.58
LOCATION L0001635     VOLUME   462255.551 3772862.842 380.58
LOCATION L0001636     VOLUME   462257.550 3772862.899 380.57
LOCATION L0001637     VOLUME   462259.549 3772862.955 380.57
LOCATION L0001638     VOLUME   462261.548 3772863.012 380.57
LOCATION L0001639     VOLUME   462263.548 3772863.069 380.56
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LOCATION L0001644     VOLUME   462273.544 3772863.351 380.55
LOCATION L0001645     VOLUME   462275.543 3772863.408 380.54
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LOCATION L0001647     VOLUME   462279.541 3772863.521 380.54
LOCATION L0001648     VOLUME   462281.540 3772863.578 380.54
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LOCATION L0001652     VOLUME   462289.537 3772863.804 380.53
LOCATION L0001653     VOLUME   462291.536 3772863.860 380.53
LOCATION L0001654     VOLUME   462293.536 3772863.917 380.53
LOCATION L0001655     VOLUME   462295.535 3772863.973 380.52
LOCATION L0001656     VOLUME   462297.534 3772864.030 380.52
LOCATION L0001657     VOLUME   462299.533 3772864.087 380.51
LOCATION L0001658     VOLUME   462301.532 3772864.143 380.50
LOCATION L0001659     VOLUME   462303.532 3772864.200 380.50
LOCATION L0001660     VOLUME   462305.531 3772864.256 380.49
LOCATION L0001661     VOLUME   462307.530 3772864.313 380.48
LOCATION L0001662     VOLUME   462309.529 3772864.369 380.48
LOCATION L0001663     VOLUME   462311.528 3772864.426 380.47
LOCATION L0001664     VOLUME   462313.528 3772864.483 380.46
LOCATION L0001665     VOLUME   462315.527 3772864.539 380.46
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LOCATION L0001670     VOLUME   462325.523 3772864.822 380.43
LOCATION L0001671     VOLUME   462327.522 3772864.878 380.43
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LOCATION L0001673     VOLUME   462331.520 3772864.992 380.42
LOCATION L0001674     VOLUME   462333.520 3772865.048 380.42
LOCATION L0001675     VOLUME   462335.519 3772865.105 380.41
LOCATION L0001676     VOLUME   462337.518 3772865.161 380.41
LOCATION L0001677     VOLUME   462339.517 3772865.218 380.40
LOCATION L0001678     VOLUME   462341.516 3772865.274 380.40
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LOCATION L0001680     VOLUME   462345.515 3772865.387 380.39
LOCATION L0001681     VOLUME   462347.514 3772865.444 380.39
LOCATION L0001682     VOLUME   462349.513 3772865.501 380.39
LOCATION L0001683     VOLUME   462351.512 3772865.557 380.39
LOCATION L0001684     VOLUME   462353.512 3772865.614 380.38
LOCATION L0001685     VOLUME   462355.511 3772865.670 380.38
LOCATION L0001686     VOLUME   462357.510 3772865.727 380.38
LOCATION L0001687     VOLUME   462359.509 3772865.783 380.38
LOCATION L0001688     VOLUME   462361.508 3772865.840 380.38
LOCATION L0001689     VOLUME   462363.508 3772865.897 380.38
LOCATION L0001690     VOLUME   462365.507 3772865.953 380.37
LOCATION L0001691     VOLUME   462367.506 3772866.010 380.37
LOCATION L0001692     VOLUME   462369.505 3772866.066 380.37
LOCATION L0001693     VOLUME   462371.504 3772866.123 380.37
LOCATION L0001694     VOLUME   462373.504 3772866.179 380.36
LOCATION L0001695     VOLUME   462375.503 3772866.236 380.36
LOCATION L0001696     VOLUME   462377.502 3772866.292 380.35
LOCATION L0001697     VOLUME   462379.501 3772866.349 380.35
LOCATION L0001698     VOLUME   462381.500 3772866.406 380.34
LOCATION L0001699     VOLUME   462383.500 3772866.462 380.34
LOCATION L0001700     VOLUME   462385.499 3772866.519 380.33
LOCATION L0001701     VOLUME   462387.498 3772866.575 380.32
LOCATION L0001702     VOLUME   462389.497 3772866.632 380.32
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LOCATION L0001704     VOLUME   462393.496 3772866.745 380.31
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LOCATION L0001709     VOLUME   462403.492 3772867.028 380.28
LOCATION L0001710     VOLUME   462405.491 3772867.084 380.27
LOCATION L0001711     VOLUME   462407.490 3772867.141 380.27
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LOCATION L0001719     VOLUME   462423.484 3772867.593 380.23
LOCATION L0001720     VOLUME   462425.483 3772867.650 380.22
LOCATION L0001721     VOLUME   462427.482 3772867.706 380.22
LOCATION L0001722     VOLUME   462429.481 3772867.763 380.21
LOCATION L0001723     VOLUME   462431.480 3772867.820 380.20
LOCATION L0001724     VOLUME   462433.480 3772867.876 380.20
LOCATION L0001725     VOLUME   462435.479 3772867.933 380.19
LOCATION L0001726     VOLUME   462437.478 3772867.989 380.19
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LOCATION L0001728     VOLUME   462441.476 3772868.102 380.18
LOCATION L0001729     VOLUME   462443.476 3772868.159 380.17
LOCATION L0001730     VOLUME   462445.475 3772868.216 380.16
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LOCATION L0001732     VOLUME   462449.473 3772868.329 380.15
LOCATION L0001733     VOLUME   462451.472 3772868.385 380.14
LOCATION L0001734     VOLUME   462453.472 3772868.442 380.13
LOCATION L0001735     VOLUME   462455.471 3772868.498 380.12
LOCATION L0001736     VOLUME   462457.470 3772868.555 380.11
LOCATION L0001737     VOLUME   462459.469 3772868.611 380.10
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LOCATION L0001742     VOLUME   462469.465 3772868.894 380.06
LOCATION L0001743     VOLUME   462471.464 3772868.951 380.05
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LOCATION L0001761     VOLUME   462507.450 3772869.969 379.98
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LOCATION L0001764     VOLUME   462513.448 3772870.139 379.97
LOCATION L0001765     VOLUME   462515.447 3772870.195 379.96
LOCATION L0001766     VOLUME   462517.446 3772870.252 379.96
LOCATION L0001767     VOLUME   462519.445 3772870.308 379.95
LOCATION L0001768     VOLUME   462521.444 3772870.365 379.95
LOCATION L0001769     VOLUME   462523.444 3772870.421 379.94
LOCATION L0001770     VOLUME   462525.443 3772870.478 379.94
LOCATION L0001771     VOLUME   462527.442 3772870.535 379.93
LOCATION L0001772     VOLUME   462529.441 3772870.591 379.91
LOCATION L0001773     VOLUME   462531.440 3772870.648 379.90
LOCATION L0001774     VOLUME   462533.440 3772870.704 379.89
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LOCATION	L0001775	VOLUME	462535.439	3772870.761	379.87
LOCATION	L0001776	VOLUME	462537.438	3772870.817	379.86
LOCATION	L0001777	VOLUME	462539.437	3772870.874	379.85
LOCATION	L0001778	VOLUME	462541.436	3772870.930	379.83
LOCATION	L0001779	VOLUME	462543.436	3772870.987	379.82
LOCATION	L0001780	VOLUME	462545.435	3772871.044	379.81
LOCATION	L0001781	VOLUME	462547.434	3772871.100	379.79
LOCATION	L0001782	VOLUME	462549.433	3772871.157	379.78
LOCATION	L0001783	VOLUME	462551.432	3772871.213	379.77
LOCATION	L0001784	VOLUME	462553.432	3772871.270	379.76
LOCATION	L0001785	VOLUME	462555.431	3772871.326	379.74
LOCATION	L0001786	VOLUME	462557.430	3772871.383	379.73
LOCATION	L0001787	VOLUME	462559.429	3772871.439	379.72
LOCATION	L0001788	VOLUME	462561.428	3772871.496	379.71
LOCATION	L0001789	VOLUME	462563.428	3772871.553	379.69
LOCATION	L0001790	VOLUME	462565.427	3772871.609	379.68
LOCATION	L0001791	VOLUME	462567.426	3772871.666	379.67
LOCATION	L0001792	VOLUME	462569.425	3772871.722	379.66
LOCATION	L0001793	VOLUME	462571.424	3772871.779	379.65
LOCATION	L0001794	VOLUME	462573.424	3772871.835	379.64
LOCATION	L0001795	VOLUME	462575.423	3772871.892	379.62
LOCATION	L0001796	VOLUME	462577.422	3772871.949	379.61
LOCATION	L0001797	VOLUME	462579.421	3772872.005	379.60
LOCATION	L0001798	VOLUME	462581.420	3772872.062	379.59
LOCATION	L0001799	VOLUME	462583.420	3772872.118	379.58
LOCATION	L0001800	VOLUME	462585.419	3772872.175	379.57
LOCATION	L0001801	VOLUME	462587.418	3772872.231	379.55
LOCATION	L0001802	VOLUME	462589.417	3772872.288	379.54
LOCATION	L0001803	VOLUME	462591.416	3772872.344	379.53
LOCATION	L0001804	VOLUME	462593.416	3772872.401	379.52
LOCATION	L0001805	VOLUME	462595.415	3772872.458	379.51
LOCATION	L0001806	VOLUME	462597.414	3772872.514	379.49
LOCATION	L0001807	VOLUME	462599.413	3772872.571	379.48
LOCATION	L0001808	VOLUME	462601.412	3772872.627	379.47
LOCATION	L0001809	VOLUME	462603.412	3772872.684	379.46
LOCATION	L0001810	VOLUME	462605.411	3772872.740	379.45
LOCATION	L0001811	VOLUME	462607.410	3772872.797	379.43
LOCATION	L0001812	VOLUME	462609.409	3772872.854	379.42
LOCATION	L0001813	VOLUME	462611.408	3772872.910	379.41
LOCATION	L0001814	VOLUME	462613.408	3772872.967	379.40
LOCATION	L0001815	VOLUME	462615.407	3772873.023	379.38
LOCATION	L0001816	VOLUME	462617.406	3772873.080	379.37
LOCATION	L0001817	VOLUME	462619.405	3772873.136	379.36
LOCATION	L0001818	VOLUME	462621.404	3772873.193	379.35
LOCATION	L0001819	VOLUME	462623.404	3772873.249	379.33
LOCATION	L0001820	VOLUME	462625.403	3772873.306	379.32
LOCATION	L0001821	VOLUME	462627.402	3772873.363	379.31
LOCATION	L0001822	VOLUME	462629.401	3772873.419	379.30

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LOCATION L0001824     VOLUME   462633.400 3772873.532 379.29
LOCATION L0001825     VOLUME   462635.399 3772873.589 379.29
LOCATION L0001826     VOLUME   462637.398 3772873.645 379.28
LOCATION L0001827     VOLUME   462639.397 3772873.702 379.28
LOCATION L0001828     VOLUME   462641.396 3772873.758 379.28
LOCATION L0001829     VOLUME   462643.396 3772873.815 379.27
LOCATION L0001830     VOLUME   462645.395 3772873.872 379.27
LOCATION L0001831     VOLUME   462647.394 3772873.928 379.27
LOCATION L0001832     VOLUME   462649.393 3772873.985 379.26
LOCATION L0001833     VOLUME   462651.392 3772874.041 379.26
LOCATION L0001834     VOLUME   462653.392 3772874.098 379.26
LOCATION L0001835     VOLUME   462655.391 3772874.154 379.25
LOCATION L0001836     VOLUME   462657.390 3772874.211 379.25
LOCATION L0001837     VOLUME   462659.389 3772874.268 379.24
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LOCATION L0001839     VOLUME   462663.388 3772874.381 379.24
LOCATION L0001840     VOLUME   462665.387 3772874.437 379.23
LOCATION L0001841     VOLUME   462667.386 3772874.494 379.23
LOCATION L0001842     VOLUME   462669.385 3772874.550 379.22
LOCATION L0001843     VOLUME   462671.384 3772874.607 379.22
LOCATION L0001844     VOLUME   462673.384 3772874.663 379.22
LOCATION L0001845     VOLUME   462675.383 3772874.720 379.21
LOCATION L0001846     VOLUME   462677.382 3772874.777 379.21
LOCATION L0001847     VOLUME   462679.381 3772874.833 379.20
LOCATION L0001848     VOLUME   462681.380 3772874.890 379.20
LOCATION L0001849     VOLUME   462683.380 3772874.946 379.19
LOCATION L0001850     VOLUME   462685.379 3772875.003 379.18
LOCATION L0001851     VOLUME   462687.378 3772875.059 379.18
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LOCATION L0001854     VOLUME   462693.376 3772875.229 379.16
LOCATION L0001855     VOLUME   462695.375 3772875.286 379.15
LOCATION L0001856     VOLUME   462697.374 3772875.342 379.15
LOCATION L0001857     VOLUME   462699.373 3772875.399 379.14
LOCATION L0001858     VOLUME   462701.372 3772875.455 379.13
LOCATION L0001859     VOLUME   462703.372 3772875.512 379.13
LOCATION L0001860     VOLUME   462705.371 3772875.568 379.12
LOCATION L0001861     VOLUME   462707.370 3772875.625 379.11
LOCATION L0001862     VOLUME   462709.369 3772875.682 379.11
LOCATION L0001863     VOLUME   462711.368 3772875.738 379.10
LOCATION L0001864     VOLUME   462713.368 3772875.795 379.10
LOCATION L0001865     VOLUME   462715.367 3772875.851 379.09
LOCATION L0001866     VOLUME   462717.366 3772875.908 379.08
LOCATION L0001867     VOLUME   462719.365 3772875.964 379.08
LOCATION L0001868     VOLUME   462721.364 3772876.021 379.07
LOCATION L0001869     VOLUME   462723.364 3772876.077 379.07
LOCATION L0001870     VOLUME   462725.363 3772876.134 379.06
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LOCATION	L0001874	VOLUME	462733.360	3772876.360	379.04
LOCATION	L0001875	VOLUME	462735.359	3772876.417	379.04
LOCATION	L0001876	VOLUME	462737.358	3772876.473	379.03
LOCATION	L0001877	VOLUME	462739.357	3772876.530	379.03
LOCATION	L0001878	VOLUME	462741.356	3772876.587	379.03
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LOCATION	L0001890	VOLUME	462765.347	3772877.265	378.98
LOCATION	L0001891	VOLUME	462767.346	3772877.322	378.98
LOCATION	L0001892	VOLUME	462769.345	3772877.378	378.97
LOCATION	L0001893	VOLUME	462771.344	3772877.435	378.97
LOCATION	L0001894	VOLUME	462773.344	3772877.491	378.96
LOCATION	L0001895	VOLUME	462775.343	3772877.548	378.96
LOCATION	L0001896	VOLUME	462777.342	3772877.605	378.95
LOCATION	L0001897	VOLUME	462779.341	3772877.661	378.95
LOCATION	L0001898	VOLUME	462781.340	3772877.718	378.94
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LOCATION	L0001901	VOLUME	462787.338	3772877.887	378.93
LOCATION	L0001902	VOLUME	462789.337	3772877.944	378.93
LOCATION	L0001903	VOLUME	462791.336	3772878.001	378.92
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LOCATION	L0001906	VOLUME	462797.334	3772878.170	378.91
LOCATION	L0001907	VOLUME	462799.333	3772878.227	378.91
LOCATION	L0001908	VOLUME	462801.332	3772878.283	378.90
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LOCATION	L0001912	VOLUME	462809.329	3772878.510	378.89
LOCATION	L0001913	VOLUME	462811.328	3772878.566	378.88
LOCATION	L0001914	VOLUME	462813.328	3772878.623	378.87
LOCATION	L0001915	VOLUME	462815.327	3772878.679	378.86
LOCATION	L0001916	VOLUME	462817.326	3772878.736	378.86
LOCATION	L0001917	VOLUME	462819.325	3772878.792	378.85
LOCATION	L0001918	VOLUME	462821.324	3772878.849	378.84

LOCATION	L0001919	VOLUME	462823.324	3772878.905	378.84
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LOCATION	L0001933	VOLUME	462851.312	3772879.697	378.77
LOCATION	L0001934	VOLUME	462853.312	3772879.754	378.76
LOCATION	L0001935	VOLUME	462855.311	3772879.810	378.76
LOCATION	L0001936	VOLUME	462857.310	3772879.867	378.76
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LOCATION	L0001938	VOLUME	462861.308	3772879.980	378.75
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LOCATION	L0001943	VOLUME	462871.304	3772880.263	378.72
LOCATION	L0001944	VOLUME	462873.304	3772880.320	378.71
LOCATION	L0001945	VOLUME	462875.303	3772880.376	378.70
LOCATION	L0001946	VOLUME	462877.302	3772880.433	378.70
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LOCATION	L0001948	VOLUME	462881.300	3772880.546	378.69
LOCATION	L0001949	VOLUME	462883.300	3772880.602	378.68
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LOCATION	L0001954	VOLUME	462893.296	3772880.885	378.66
LOCATION	L0001955	VOLUME	462895.295	3772880.942	378.65
LOCATION	L0001956	VOLUME	462897.294	3772880.998	378.65
LOCATION	L0001957	VOLUME	462899.293	3772881.055	378.64
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LOCATION	L0001960	VOLUME	462905.291	3772881.224	378.63
LOCATION	L0001961	VOLUME	462907.290	3772881.281	378.62
LOCATION	L0001962	VOLUME	462909.289	3772881.338	378.62
LOCATION	L0001963	VOLUME	462911.288	3772881.394	378.61
LOCATION	L0001964	VOLUME	462913.288	3772881.451	378.60
LOCATION	L0001965	VOLUME	462915.287	3772881.507	378.59
LOCATION	L0001966	VOLUME	462917.286	3772881.564	378.58

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LOCATION L0001970     VOLUME   462925.283 3772881.790 378.55
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LOCATION L0001972     VOLUME   462929.281 3772881.903 378.53
LOCATION L0001973     VOLUME   462931.280 3772881.960 378.52
LOCATION L0001974     VOLUME   462933.280 3772882.016 378.51
LOCATION L0001975     VOLUME   462935.279 3772882.073 378.50
LOCATION L0001976     VOLUME   462937.278 3772882.129 378.49
LOCATION L0001977     VOLUME   462939.277 3772882.186 378.48
LOCATION L0001978     VOLUME   462941.276 3772882.243 378.47
LOCATION L0001979     VOLUME   462943.276 3772882.299 378.47
LOCATION L0001980     VOLUME   462945.275 3772882.356 378.46
LOCATION L0001981     VOLUME   462947.274 3772882.412 378.45
LOCATION L0001982     VOLUME   462949.273 3772882.469 378.45
LOCATION L0001983     VOLUME   462951.272 3772882.525 378.44
LOCATION L0001984     VOLUME   462953.272 3772882.582 378.43
LOCATION L0001985     VOLUME   462955.271 3772882.639 378.42
LOCATION L0001986     VOLUME   462957.270 3772882.695 378.42
LOCATION L0001987     VOLUME   462959.269 3772882.752 378.41
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LOCATION L0001997     VOLUME   462979.261 3772883.317 378.47
LOCATION L0001998     VOLUME   462981.260 3772883.374 378.48
LOCATION L0001999     VOLUME   462983.260 3772883.430 378.49
LOCATION L0002000     VOLUME   462985.259 3772883.487 378.50
LOCATION L0002001     VOLUME   462987.258 3772883.543 378.51
LOCATION L0002002     VOLUME   462989.257 3772883.600 378.53
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LOCATION L0002006     VOLUME   462997.254 3772883.826 378.60
LOCATION L0002007     VOLUME   462999.253 3772883.883 378.61
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LOCATION L0002009     VOLUME   463003.252 3772883.996 378.65
LOCATION L0002010     VOLUME   463005.251 3772884.053 378.67
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LOCATION L0002012     VOLUME   463009.249 3772884.166 378.70
LOCATION L0002013     VOLUME   463011.248 3772884.222 378.72
LOCATION L0002014     VOLUME   463013.248 3772884.279 378.72
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LOCATION L0002020     VOLUME   463025.243 3772884.618 378.38
LOCATION L0002021     VOLUME   463027.242 3772884.675 378.32
LOCATION L0002022     VOLUME   463029.241 3772884.731 378.26
LOCATION L0002023     VOLUME   463031.240 3772884.788 378.21
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LOCATION L0002039     VOLUME   463063.228 3772885.693 377.81
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LOCATION L0002042     VOLUME   463069.225 3772885.862 377.89
LOCATION L0002043     VOLUME   463071.224 3772885.919 377.92
LOCATION L0002044     VOLUME   463073.224 3772885.976 377.95
LOCATION L0002045     VOLUME   463075.223 3772886.032 377.98
LOCATION L0002046     VOLUME   463077.222 3772886.089 378.02
LOCATION L0002047     VOLUME   463079.221 3772886.145 378.05
LOCATION L0002048     VOLUME   463081.220 3772886.202 378.08
LOCATION L0002049     VOLUME   463083.220 3772886.258 378.12
LOCATION L0002050     VOLUME   463085.219 3772886.315 378.15
LOCATION L0002051     VOLUME   463087.218 3772886.372 378.18
LOCATION L0002052     VOLUME   463089.217 3772886.428 378.22
LOCATION L0002053     VOLUME   463091.216 3772886.485 378.22
LOCATION L0002054     VOLUME   463093.216 3772886.541 378.21
LOCATION L0002055     VOLUME   463095.215 3772886.598 378.20
LOCATION L0002056     VOLUME   463097.214 3772886.654 378.19
LOCATION L0002057     VOLUME   463099.213 3772886.711 378.18
LOCATION L0002058     VOLUME   463101.212 3772886.767 378.18
LOCATION L0002059     VOLUME   463103.212 3772886.824 378.17
LOCATION L0002060     VOLUME   463105.211 3772886.881 378.16
LOCATION L0002061     VOLUME   463107.210 3772886.937 378.15
LOCATION L0002062     VOLUME   463109.209 3772886.994 378.14
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LOCATION L0002066     VOLUME   463117.206 3772887.220 378.10
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LOCATION L0002072     VOLUME   463129.201 3772887.559 378.03
LOCATION L0002073     VOLUME   463131.200 3772887.616 378.02
LOCATION L0002074     VOLUME   463133.200 3772887.672 378.01
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LOCATION L0002076     VOLUME   463137.198 3772887.786 377.98
LOCATION L0002077     VOLUME   463139.197 3772887.842 377.97
LOCATION L0002078     VOLUME   463141.196 3772887.899 377.96
LOCATION L0002079     VOLUME   463143.196 3772887.955 377.95
LOCATION L0002080     VOLUME   463145.195 3772888.012 377.94
LOCATION L0002081     VOLUME   463147.194 3772888.068 377.93
LOCATION L0002082     VOLUME   463149.193 3772888.125 377.93
LOCATION L0002083     VOLUME   463151.192 3772888.181 377.92
LOCATION L0002084     VOLUME   463153.192 3772888.238 377.91
LOCATION L0002085     VOLUME   463155.191 3772888.295 377.91
LOCATION L0002086     VOLUME   463157.190 3772888.351 377.90
LOCATION L0002087     VOLUME   463159.189 3772888.408 377.89
LOCATION L0002088     VOLUME   463161.188 3772888.464 377.88
LOCATION L0002089     VOLUME   463163.188 3772888.521 377.88
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LOCATION L0002091     VOLUME   463167.186 3772888.634 377.86
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LOCATION L0002093     VOLUME   463171.184 3772888.747 377.85
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LOCATION L0002096     VOLUME   463177.182 3772888.917 377.84
LOCATION L0002097     VOLUME   463179.181 3772888.973 377.84
LOCATION L0002098     VOLUME   463181.180 3772889.030 377.84
LOCATION L0002099     VOLUME   463183.180 3772889.086 377.83
LOCATION L0002100     VOLUME   463185.179 3772889.143 377.83
LOCATION L0002101     VOLUME   463187.178 3772889.200 377.83
LOCATION L0002102     VOLUME   463189.177 3772889.256 377.82
LOCATION L0002103     VOLUME   463191.176 3772889.313 377.82
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LOCATION L0002106     VOLUME   463197.174 3772889.482 377.82
LOCATION L0002107     VOLUME   463199.173 3772889.539 377.82
LOCATION L0002108     VOLUME   463201.172 3772889.595 377.83
LOCATION L0002109     VOLUME   463203.172 3772889.652 377.83
LOCATION L0002110     VOLUME   463205.171 3772889.709 377.83
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LOCATION L0002115     VOLUME   463215.167 3772889.991 377.84
LOCATION L0002116     VOLUME   463217.166 3772890.048 377.84
LOCATION L0002117     VOLUME   463219.165 3772890.105 377.84
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LOCATION L0002119     VOLUME   463223.164 3772890.218 377.84
LOCATION L0002120     VOLUME   463225.163 3772890.274 377.84
LOCATION L0002121     VOLUME   463227.162 3772890.331 377.84
LOCATION L0002122     VOLUME   463229.161 3772890.387 377.84
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LOCATION L0002137     VOLUME   463259.149 3772891.236 377.79
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LOCATION L0002171     VOLUME   463327.122 3772893.159 377.67
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LOCATION L0002182     VOLUME   463349.113 3772893.781 377.52
LOCATION L0002183     VOLUME   463351.112 3772893.838 377.47
LOCATION L0002184     VOLUME   463353.112 3772893.894 377.41
LOCATION L0002185     VOLUME   463355.111 3772893.951 377.36
LOCATION L0002186     VOLUME   463357.110 3772894.007 377.31
LOCATION L0002187     VOLUME   463359.109 3772894.064 377.25
LOCATION L0002188     VOLUME   463361.108 3772894.120 377.20
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LOCATION L0002190     VOLUME   463365.107 3772894.233 377.09
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LOCATION L0002201     VOLUME   463387.098 3772894.856 377.04
LOCATION L0002202     VOLUME   463389.097 3772894.912 377.05
LOCATION L0002203     VOLUME   463391.096 3772894.969 377.07
LOCATION L0002204     VOLUME   463393.096 3772895.025 377.08
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LOCATION L0002206     VOLUME   463397.094 3772895.138 377.12
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LOCATION	L0002212	VOLUME	463409.089	3772895.478	377.41
LOCATION	L0002213	VOLUME	463411.088	3772895.534	377.46
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LOCATION	L0002250	VOLUME	463485.059	3772897.627	377.12
LOCATION	L0002251	VOLUME	463487.058	3772897.684	377.11
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LOCATION	L0002254	VOLUME	463493.056	3772897.853	377.06

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LOCATION	L0002256	VOLUME	463497.054	3772897.966	377.02
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LOCATION	L0002269	VOLUME	463523.044	3772898.702	376.82
LOCATION	L0002270	VOLUME	463525.043	3772898.758	376.80
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LOCATION	L0002273	VOLUME	463531.040	3772898.928	376.74
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LOCATION	L0002293	VOLUME	463571.024	3772900.059	376.23
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LOCATION	L0002297	VOLUME	463579.021	3772900.285	376.13
LOCATION	L0002298	VOLUME	463581.020	3772900.342	376.11
LOCATION	L0002299	VOLUME	463583.020	3772900.399	376.10
LOCATION	L0002300	VOLUME	463585.019	3772900.455	376.08
LOCATION	L0002301	VOLUME	463587.018	3772900.512	376.06
LOCATION	L0002302	VOLUME	463589.017	3772900.568	376.05

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SRCPARAM	L0002167	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002168	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002169	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002170	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002171	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002172	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002173	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002174	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002175	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002176	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002177	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002178	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002179	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002180	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002181	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002182	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002183	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002184	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002185	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002186	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002187	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002188	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002189	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002190	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002191	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002192	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002193	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002194	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002195	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002196	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002197	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002198	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002199	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002200	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002201	0.000001474	4.50	0.93	4.88

SRCPARAM	L0002202	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002203	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002204	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002205	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002206	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002207	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002208	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002209	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002210	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002211	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002212	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002213	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002214	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002215	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002216	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002217	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002218	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002219	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002220	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002221	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002222	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002223	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002224	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002225	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002226	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002227	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002228	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002229	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002230	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002231	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002232	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002233	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002234	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002235	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002236	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002237	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002238	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002239	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002240	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002241	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002242	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002243	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002244	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002245	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002246	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002247	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002248	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002249	0.000001474	4.50	0.93	4.88

SRCPARAM	L0002250	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002251	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002252	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002253	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002254	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002255	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002256	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002257	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002258	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002259	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002260	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002261	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002262	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002263	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002264	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002265	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002266	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002267	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002268	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002269	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002270	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002271	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002272	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002273	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002274	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002275	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002276	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002277	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002278	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002279	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002280	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002281	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002282	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002283	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002284	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002285	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002286	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002287	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002288	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002289	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002290	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002291	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002292	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002293	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002294	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002295	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002296	0.000001474	4.50	0.93	4.88
SRCPARAM	L0002297	0.000001474	4.50	0.93	4.88

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   SRCPARAM L0002298     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002299     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002300     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002301     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002302     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002303     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002304     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002305     0.000001474      4.50      0.93      4.88
   SRCPARAM L0002306     0.000001474      4.50      0.93      4.88
** ----------------------------------------------------------------------
   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "Palmetto Replacement Site.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE FONT_V9_ADJU\FONT_v9.SFC
   PROFFILE FONT_V9_ADJU\FONT_v9.PFL
   SURFDATA 3102 2011
   UAIRDATA 3190 2011
   SITEDATA 99999 2011
   PROFBASE 367.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Palmetto Replacement Site.AD\01H1GALL.PLT" 31
```

```
   PLOTFILE 24 ALL 1ST "Palmetto Replacement Site.AD\24H1GALL.PLT" 32
   PLOTFILE ANNUAL ALL "Palmetto Replacement Site.AD\AN00GALL.PLT" 33
   SUMMFILE "Palmetto Replacement Site.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    4691       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187    4691       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

                                  PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                            ***     MODEL SETUP OPTIONS SUMMARY
 ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
```

```
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses URBAN Dispersion Algorithm for the SBL for  2306 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2035210.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

 **Other Options Specified:
        ADJ_U*   - Use ADJ_U* option for SBL in AERMET
        TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_10

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:   2306 Source(s);       1 Source Group(s); and      46
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:   2306 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
```

Palmetto Replacement Site.ADO
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 367.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 4.5 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: Palmetto Replacement Site.err

**File for Summary of Results: Palmetto Replacement Site.sum

↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

PAGE 2
*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.14740E-05	458988.9	3772770.4	379.3	4.50	0.93	4.88	YES	
L0000002	0	0.14740E-05	458990.9	3772770.5	379.3	4.50	0.93			

4.88	YES							
L0000003		0	0.14740E-05	458992.9	3772770.5	379.3	4.50	0.93
4.88	YES							
L0000004		0	0.14740E-05	458994.9	3772770.6	379.3	4.50	0.93
4.88	YES							
L0000005		0	0.14740E-05	458996.9	3772770.6	379.3	4.50	0.93
4.88	YES							
L0000006		0	0.14740E-05	458998.9	3772770.7	379.3	4.50	0.93
4.88	YES							
L0000007		0	0.14740E-05	459000.9	3772770.8	379.3	4.50	0.93
4.88	YES							
L0000008		0	0.14740E-05	459002.9	3772770.8	379.3	4.50	0.93
4.88	YES							
L0000009		0	0.14740E-05	459004.9	3772770.9	379.3	4.50	0.93
4.88	YES							
L0000010		0	0.14740E-05	459006.9	3772770.9	379.3	4.50	0.93
4.88	YES							
L0000011		0	0.14740E-05	459008.8	3772771.0	379.3	4.50	0.93
4.88	YES							
L0000012		0	0.14740E-05	459010.8	3772771.0	379.3	4.50	0.93
4.88	YES							
L0000013		0	0.14740E-05	459012.8	3772771.1	379.3	4.50	0.93
4.88	YES							
L0000014		0	0.14740E-05	459014.8	3772771.2	379.3	4.50	0.93
4.88	YES							
L0000015		0	0.14740E-05	459016.8	3772771.2	379.3	4.50	0.93
4.88	YES							
L0000016		0	0.14740E-05	459018.8	3772771.3	379.3	4.50	0.93
4.88	YES							
L0000017		0	0.14740E-05	459020.8	3772771.3	379.3	4.50	0.93
4.88	YES							
L0000018		0	0.14740E-05	459022.8	3772771.4	379.3	4.50	0.93
4.88	YES							
L0000019		0	0.14740E-05	459024.8	3772771.4	379.3	4.50	0.93
4.88	YES							
L0000020		0	0.14740E-05	459026.8	3772771.5	379.3	4.50	0.93
4.88	YES							
L0000021		0	0.14740E-05	459028.8	3772771.6	379.3	4.50	0.93
4.88	YES							
L0000022		0	0.14740E-05	459030.8	3772771.6	379.3	4.50	0.93
4.88	YES							
L0000023		0	0.14740E-05	459032.8	3772771.7	379.3	4.50	0.93
4.88	YES							
L0000024		0	0.14740E-05	459034.8	3772771.7	379.3	4.50	0.93
4.88	YES							
L0000025		0	0.14740E-05	459036.8	3772771.8	379.3	4.50	0.93
4.88	YES							
L0000026		0	0.14740E-05	459038.8	3772771.8	379.3	4.50	0.93

```
4.88     YES
 L0000027         0   0.14740E-05  459040.8 3772771.9   379.3     4.50     0.93
4.88     YES
 L0000028         0   0.14740E-05  459042.8 3772771.9   379.3     4.50     0.93
4.88     YES
 L0000029         0   0.14740E-05  459044.8 3772772.0   379.3     4.50     0.93
4.88     YES
 L0000030         0   0.14740E-05  459046.8 3772772.1   379.3     4.50     0.93
4.88     YES
 L0000031         0   0.14740E-05  459048.8 3772772.1   379.4     4.50     0.93
4.88     YES
 L0000032         0   0.14740E-05  459050.8 3772772.2   379.4     4.50     0.93
4.88     YES
 L0000033         0   0.14740E-05  459052.8 3772772.2   379.4     4.50     0.93
4.88     YES
 L0000034         0   0.14740E-05  459054.8 3772772.3   379.4     4.50     0.93
4.88     YES
 L0000035         0   0.14740E-05  459056.8 3772772.3   379.4     4.50     0.93
4.88     YES
 L0000036         0   0.14740E-05  459058.8 3772772.4   379.4     4.50     0.93
4.88     YES
 L0000037         0   0.14740E-05  459060.8 3772772.5   379.4     4.50     0.93
4.88     YES
 L0000038         0   0.14740E-05  459062.8 3772772.5   379.4     4.50     0.93
4.88     YES
 L0000039         0   0.14740E-05  459064.8 3772772.6   379.4     4.50     0.93
4.88     YES
 L0000040         0   0.14740E-05  459066.8 3772772.6   379.4     4.50     0.93
4.88     YES
```


*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0000027	0	0.14740E-05	459040.8	3772771.9	379.3	4.50	0.93	4.88	YES	
L0000028	0	0.14740E-05	459042.8	3772771.9	379.3	4.50	0.93	4.88	YES	
L0000029	0	0.14740E-05	459044.8	3772772.0	379.3	4.50	0.93	4.88	YES	
L0000030	0	0.14740E-05	459046.8	3772772.1	379.3	4.50	0.93	4.88	YES	
L0000031	0	0.14740E-05	459048.8	3772772.1	379.4	4.50	0.93	4.88	YES	
L0000032	0	0.14740E-05	459050.8	3772772.2	379.4	4.50	0.93	4.88	YES	
L0000033	0	0.14740E-05	459052.8	3772772.2	379.4	4.50	0.93	4.88	YES	
L0000034	0	0.14740E-05	459054.8	3772772.3	379.4	4.50	0.93	4.88	YES	
L0000035	0	0.14740E-05	459056.8	3772772.3	379.4	4.50	0.93	4.88	YES	
L0000036	0	0.14740E-05	459058.8	3772772.4	379.4	4.50	0.93	4.88	YES	
L0000037	0	0.14740E-05	459060.8	3772772.5	379.4	4.50	0.93	4.88	YES	
L0000038	0	0.14740E-05	459062.8	3772772.5	379.4	4.50	0.93	4.88	YES	
L0000039	0	0.14740E-05	459064.8	3772772.6	379.4	4.50	0.93	4.88	YES	
L0000040	0	0.14740E-05	459066.8	3772772.6	379.4	4.50	0.93	4.88	YES	

L0000041	0	0.14740E-05	459068.8	3772772.7	379.4	4.50	0.93	4.88 YES
L0000042	0	0.14740E-05	459070.8	3772772.7	379.4	4.50	0.93	4.88 YES
L0000043	0	0.14740E-05	459072.8	3772772.8	379.5	4.50	0.93	4.88 YES
L0000044	0	0.14740E-05	459074.8	3772772.9	379.5	4.50	0.93	4.88 YES
L0000045	0	0.14740E-05	459076.8	3772772.9	379.5	4.50	0.93	4.88 YES
L0000046	0	0.14740E-05	459078.8	3772773.0	379.5	4.50	0.93	4.88 YES
L0000047	0	0.14740E-05	459080.8	3772773.0	379.5	4.50	0.93	4.88 YES
L0000048	0	0.14740E-05	459082.8	3772773.1	379.5	4.50	0.93	4.88 YES
L0000049	0	0.14740E-05	459084.8	3772773.1	379.5	4.50	0.93	4.88 YES
L0000050	0	0.14740E-05	459086.8	3772773.2	379.6	4.50	0.93	4.88 YES
L0000051	0	0.14740E-05	459088.8	3772773.2	379.6	4.50	0.93	4.88 YES
L0000052	0	0.14740E-05	459090.8	3772773.3	379.6	4.50	0.93	4.88 YES
L0000053	0	0.14740E-05	459092.8	3772773.4	379.6	4.50	0.93	4.88 YES
L0000054	0	0.14740E-05	459094.8	3772773.4	379.6	4.50	0.93	4.88 YES
L0000055	0	0.14740E-05	459096.8	3772773.5	379.6	4.50	0.93	4.88 YES
L0000056	0	0.14740E-05	459098.8	3772773.5	379.6	4.50	0.93	4.88 YES
L0000057	0	0.14740E-05	459100.8	3772773.6	379.7	4.50	0.93	4.88 YES
L0000058	0	0.14740E-05	459102.8	3772773.6	379.7	4.50	0.93	4.88 YES
L0000059	0	0.14740E-05	459104.8	3772773.7	379.7	4.50	0.93	4.88 YES
L0000060	0	0.14740E-05	459106.8	3772773.8	379.7	4.50	0.93	4.88 YES
L0000061	0	0.14740E-05	459108.8	3772773.8	379.7	4.50	0.93	4.88 YES
L0000062	0	0.14740E-05	459110.8	3772773.9	379.7	4.50	0.93	4.88 YES
L0000063	0	0.14740E-05	459112.8	3772773.9	379.8	4.50	0.93	4.88 YES
L0000064	0	0.14740E-05	459114.8	3772774.0	379.8	4.50	0.93	

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4.88     YES
 L0000065         0   0.14740E-05  459116.8 3772774.0   379.8     4.50     0.93
4.88     YES
 L0000066         0   0.14740E-05  459118.8 3772774.1   379.8     4.50     0.93
4.88     YES
 L0000067         0   0.14740E-05  459120.8 3772774.2   379.8     4.50     0.93
4.88     YES
 L0000068         0   0.14740E-05  459122.8 3772774.2   379.8     4.50     0.93
4.88     YES
 L0000069         0   0.14740E-05  459124.8 3772774.3   379.8     4.50     0.93
4.88     YES
 L0000070         0   0.14740E-05  459126.8 3772774.3   379.8     4.50     0.93
4.88     YES
 L0000071         0   0.14740E-05  459128.8 3772774.4   379.8     4.50     0.93
4.88     YES
 L0000072         0   0.14740E-05  459130.8 3772774.4   379.8     4.50     0.93
4.88     YES
 L0000073         0   0.14740E-05  459132.8 3772774.5   379.8     4.50     0.93
4.88     YES
 L0000074         0   0.14740E-05  459134.8 3772774.6   379.8     4.50     0.93
4.88     YES
 L0000075         0   0.14740E-05  459136.8 3772774.6   379.9     4.50     0.93
4.88     YES
 L0000076         0   0.14740E-05  459138.8 3772774.7   379.9     4.50     0.93
4.88     YES
 L0000077         0   0.14740E-05  459140.8 3772774.7   379.9     4.50     0.93
4.88     YES
 L0000078         0   0.14740E-05  459142.8 3772774.8   379.9     4.50     0.93
4.88     YES
 L0000079         0   0.14740E-05  459144.8 3772774.8   379.9     4.50     0.93
4.88     YES
 L0000080         0   0.14740E-05  459146.8 3772774.9   379.9     4.50     0.93
4.88     YES
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
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ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0000081	0	0.14740E-05	459148.8	3772774.9	379.9	4.50	0.93	4.88 YES
L0000082	0	0.14740E-05	459150.8	3772775.0	379.9	4.50	0.93	4.88 YES
L0000083	0	0.14740E-05	459152.8	3772775.1	379.9	4.50	0.93	4.88 YES
L0000084	0	0.14740E-05	459154.8	3772775.1	379.9	4.50	0.93	4.88 YES
L0000085	0	0.14740E-05	459156.8	3772775.2	379.9	4.50	0.93	4.88 YES
L0000086	0	0.14740E-05	459158.8	3772775.2	379.9	4.50	0.93	4.88 YES
L0000087	0	0.14740E-05	459160.8	3772775.3	379.9	4.50	0.93	4.88 YES
L0000088	0	0.14740E-05	459162.8	3772775.3	379.9	4.50	0.93	4.88 YES
L0000089	0	0.14740E-05	459164.8	3772775.4	379.9	4.50	0.93	4.88 YES
L0000090	0	0.14740E-05	459166.8	3772775.5	379.9	4.50	0.93	4.88 YES
L0000091	0	0.14740E-05	459168.8	3772775.5	379.9	4.50	0.93	4.88 YES
L0000092	0	0.14740E-05	459170.8	3772775.6	379.9	4.50	0.93	4.88 YES
L0000093	0	0.14740E-05	459172.8	3772775.6	380.0	4.50	0.93	4.88 YES
L0000094	0	0.14740E-05	459174.8	3772775.7	380.0	4.50	0.93	4.88 YES
L0000095	0	0.14740E-05	459176.8	3772775.7	380.0	4.50	0.93	4.88 YES
L0000096	0	0.14740E-05	459178.8	3772775.8	380.0	4.50	0.93	4.88 YES
L0000097	0	0.14740E-05	459180.8	3772775.9	380.0	4.50	0.93	4.88 YES
L0000098	0	0.14740E-05	459182.8	3772775.9	380.1	4.50	0.93	4.88 YES
L0000099	0	0.14740E-05	459184.8	3772776.0	380.1	4.50	0.93	4.88 YES
L0000100	0	0.14740E-05	459186.8	3772776.0	380.1	4.50	0.93	4.88 YES
L0000101	0	0.14740E-05	459188.8	3772776.1	380.1	4.50	0.93	4.88 YES
L0000102	0	0.14740E-05	459190.8	3772776.1	380.1	4.50	0.93	

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4.88     YES
 L0000103         0   0.14740E-05  459192.8 3772776.2   380.1     4.50     0.93
4.88     YES
 L0000104         0   0.14740E-05  459194.8 3772776.2   380.2     4.50     0.93
4.88     YES
 L0000105         0   0.14740E-05  459196.8 3772776.3   380.2     4.50     0.93
4.88     YES
 L0000106         0   0.14740E-05  459198.8 3772776.4   380.2     4.50     0.93
4.88     YES
 L0000107         0   0.14740E-05  459200.8 3772776.4   380.2     4.50     0.93
4.88     YES
 L0000108         0   0.14740E-05  459202.8 3772776.5   380.3     4.50     0.93
4.88     YES
 L0000109         0   0.14740E-05  459204.8 3772776.5   380.3     4.50     0.93
4.88     YES
 L0000110         0   0.14740E-05  459206.8 3772776.6   380.3     4.50     0.93
4.88     YES
 L0000111         0   0.14740E-05  459208.8 3772776.6   380.4     4.50     0.93
4.88     YES
 L0000112         0   0.14740E-05  459210.8 3772776.7   380.4     4.50     0.93
4.88     YES
 L0000113         0   0.14740E-05  459212.8 3772776.8   380.4     4.50     0.93
4.88     YES
 L0000114         0   0.14740E-05  459214.8 3772776.8   380.4     4.50     0.93
4.88     YES
 L0000115         0   0.14740E-05  459216.8 3772776.9   380.5     4.50     0.93
4.88     YES
 L0000116         0   0.14740E-05  459218.8 3772776.9   380.5     4.50     0.93
4.88     YES
 L0000117         0   0.14740E-05  459220.8 3772777.0   380.5     4.50     0.93
4.88     YES
 L0000118         0   0.14740E-05  459222.8 3772777.0   380.5     4.50     0.93
4.88     YES
 L0000119         0   0.14740E-05  459224.8 3772777.1   380.6     4.50     0.93
4.88     YES
 L0000120         0   0.14740E-05  459226.8 3772777.2   380.6     4.50     0.93
4.88     YES
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000121	0	0.14740E-05	459228.8	3772777.2	380.6	4.50	0.93	4.88	YES	
L0000122	0	0.14740E-05	459230.8	3772777.3	380.6	4.50	0.93	4.88	YES	
L0000123	0	0.14740E-05	459232.8	3772777.3	380.6	4.50	0.93	4.88	YES	
L0000124	0	0.14740E-05	459234.8	3772777.4	380.7	4.50	0.93	4.88	YES	
L0000125	0	0.14740E-05	459236.8	3772777.4	380.7	4.50	0.93	4.88	YES	
L0000126	0	0.14740E-05	459238.8	3772777.5	380.7	4.50	0.93	4.88	YES	
L0000127	0	0.14740E-05	459240.8	3772777.5	380.7	4.50	0.93	4.88	YES	
L0000128	0	0.14740E-05	459242.8	3772777.6	380.7	4.50	0.93	4.88	YES	
L0000129	0	0.14740E-05	459244.8	3772777.7	380.8	4.50	0.93	4.88	YES	
L0000130	0	0.14740E-05	459246.8	3772777.7	380.8	4.50	0.93	4.88	YES	
L0000131	0	0.14740E-05	459248.8	3772777.8	380.8	4.50	0.93	4.88	YES	
L0000132	0	0.14740E-05	459250.8	3772777.8	380.8	4.50	0.93	4.88	YES	
L0000133	0	0.14740E-05	459252.8	3772777.9	380.8	4.50	0.93	4.88	YES	
L0000134	0	0.14740E-05	459254.8	3772777.9	380.8	4.50	0.93	4.88	YES	
L0000135	0	0.14740E-05	459256.8	3772778.0	380.8	4.50	0.93	4.88	YES	
L0000136	0	0.14740E-05	459258.8	3772778.1	380.8	4.50	0.93	4.88	YES	
L0000137	0	0.14740E-05	459260.7	3772778.1	380.8	4.50	0.93	4.88	YES	
L0000138	0	0.14740E-05	459262.7	3772778.2	380.8	4.50	0.93	4.88	YES	
L0000139	0	0.14740E-05	459264.7	3772778.2	380.8	4.50	0.93	4.88	YES	
L0000140	0	0.14740E-05	459266.7	3772778.3	380.8	4.50	0.93			

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4.88     YES
 L0000141         0   0.14740E-05  459268.7 3772778.3   380.8     4.50     0.93
4.88     YES
 L0000142         0   0.14740E-05  459270.7 3772778.4   380.8     4.50     0.93
4.88     YES
 L0000143         0   0.14740E-05  459272.7 3772778.5   380.8     4.50     0.93
4.88     YES
 L0000144         0   0.14740E-05  459274.7 3772778.5   380.8     4.50     0.93
4.88     YES
 L0000145         0   0.14740E-05  459276.7 3772778.6   380.8     4.50     0.93
4.88     YES
 L0000146         0   0.14740E-05  459278.7 3772778.6   380.8     4.50     0.93
4.88     YES
 L0000147         0   0.14740E-05  459280.7 3772778.7   380.8     4.50     0.93
4.88     YES
 L0000148         0   0.14740E-05  459282.7 3772778.7   380.8     4.50     0.93
4.88     YES
 L0000149         0   0.14740E-05  459284.7 3772778.8   380.8     4.50     0.93
4.88     YES
 L0000150         0   0.14740E-05  459286.7 3772778.8   380.8     4.50     0.93
4.88     YES
 L0000151         0   0.14740E-05  459288.7 3772778.9   380.8     4.50     0.93
4.88     YES
 L0000152         0   0.14740E-05  459290.7 3772779.0   380.7     4.50     0.93
4.88     YES
 L0000153         0   0.14740E-05  459292.7 3772779.0   380.7     4.50     0.93
4.88     YES
 L0000154         0   0.14740E-05  459294.7 3772779.1   380.7     4.50     0.93
4.88     YES
 L0000155         0   0.14740E-05  459296.7 3772779.1   380.7     4.50     0.93
4.88     YES
 L0000156         0   0.14740E-05  459298.7 3772779.2   380.7     4.50     0.93
4.88     YES
 L0000157         0   0.14740E-05  459300.7 3772779.2   380.7     4.50     0.93
4.88     YES
 L0000158         0   0.14740E-05  459302.7 3772779.3   380.7     4.50     0.93
4.88     YES
 L0000159         0   0.14740E-05  459304.7 3772779.4   380.7     4.50     0.93
4.88     YES
 L0000160         0   0.14740E-05  459306.7 3772779.4   380.8     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY
L0000161	0	0.14740E-05	459308.7	3772779.5	380.8	4.50	0.93	4.88	YES
L0000162	0	0.14740E-05	459310.7	3772779.5	380.8	4.50	0.93	4.88	YES
L0000163	0	0.14740E-05	459312.7	3772779.6	380.8	4.50	0.93	4.88	YES
L0000164	0	0.14740E-05	459314.7	3772779.6	380.8	4.50	0.93	4.88	YES
L0000165	0	0.14740E-05	459316.7	3772779.7	380.8	4.50	0.93	4.88	YES
L0000166	0	0.14740E-05	459318.7	3772779.8	380.8	4.50	0.93	4.88	YES
L0000167	0	0.14740E-05	459320.7	3772779.8	380.8	4.50	0.93	4.88	YES
L0000168	0	0.14740E-05	459322.7	3772779.9	380.8	4.50	0.93	4.88	YES
L0000169	0	0.14740E-05	459324.7	3772779.9	380.8	4.50	0.93	4.88	YES
L0000170	0	0.14740E-05	459326.7	3772780.0	380.8	4.50	0.93	4.88	YES
L0000171	0	0.14740E-05	459328.7	3772780.0	380.8	4.50	0.93	4.88	YES
L0000172	0	0.14740E-05	459330.7	3772780.1	380.8	4.50	0.93	4.88	YES
L0000173	0	0.14740E-05	459332.7	3772780.2	380.9	4.50	0.93	4.88	YES
L0000174	0	0.14740E-05	459334.7	3772780.2	380.9	4.50	0.93	4.88	YES
L0000175	0	0.14740E-05	459336.7	3772780.3	380.9	4.50	0.93	4.88	YES
L0000176	0	0.14740E-05	459338.7	3772780.3	380.9	4.50	0.93	4.88	YES
L0000177	0	0.14740E-05	459340.7	3772780.4	380.9	4.50	0.93	4.88	YES
L0000178	0	0.14740E-05	459342.7	3772780.4	380.9	4.50	0.93		

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4.88     YES
 L0000179         0   0.14740E-05  459344.7 3772780.5   380.9     4.50     0.93
4.88     YES
 L0000180         0   0.14740E-05  459346.7 3772780.5   380.9     4.50     0.93
4.88     YES
 L0000181         0   0.14740E-05  459348.7 3772780.6   380.9     4.50     0.93
4.88     YES
 L0000182         0   0.14740E-05  459350.7 3772780.7   380.9     4.50     0.93
4.88     YES
 L0000183         0   0.14740E-05  459352.7 3772780.7   381.0     4.50     0.93
4.88     YES
 L0000184         0   0.14740E-05  459354.7 3772780.8   381.0     4.50     0.93
4.88     YES
 L0000185         0   0.14740E-05  459356.7 3772780.8   381.0     4.50     0.93
4.88     YES
 L0000186         0   0.14740E-05  459358.7 3772780.9   381.0     4.50     0.93
4.88     YES
 L0000187         0   0.14740E-05  459360.7 3772780.9   381.0     4.50     0.93
4.88     YES
 L0000188         0   0.14740E-05  459362.7 3772781.0   381.0     4.50     0.93
4.88     YES
 L0000189         0   0.14740E-05  459364.7 3772781.1   381.1     4.50     0.93
4.88     YES
 L0000190         0   0.14740E-05  459366.7 3772781.1   381.1     4.50     0.93
4.88     YES
 L0000191         0   0.14740E-05  459368.7 3772781.2   381.1     4.50     0.93
4.88     YES
 L0000192         0   0.14740E-05  459370.7 3772781.2   381.1     4.50     0.93
4.88     YES
 L0000193         0   0.14740E-05  459372.7 3772781.3   381.1     4.50     0.93
4.88     YES
 L0000194         0   0.14740E-05  459374.7 3772781.3   381.1     4.50     0.93
4.88     YES
 L0000195         0   0.14740E-05  459376.7 3772781.4   381.2     4.50     0.93
4.88     YES
 L0000196         0   0.14740E-05  459378.7 3772781.5   381.2     4.50     0.93
4.88     YES
 L0000197         0   0.14740E-05  459380.7 3772781.5   381.2     4.50     0.93
4.88     YES
 L0000198         0   0.14740E-05  459382.7 3772781.6   381.2     4.50     0.93
4.88     YES
 L0000199         0   0.14740E-05  459384.7 3772781.6   381.2     4.50     0.93
4.88     YES
 L0000200         0   0.14740E-05  459386.7 3772781.7   381.2     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0000201	0	0.14740E-05	459388.7	3772781.7	381.2	4.50	0.93	4.88	YES	
L0000202	0	0.14740E-05	459390.7	3772781.8	381.3	4.50	0.93	4.88	YES	
L0000203	0	0.14740E-05	459392.7	3772781.8	381.3	4.50	0.93	4.88	YES	
L0000204	0	0.14740E-05	459394.7	3772781.9	381.3	4.50	0.93	4.88	YES	
L0000205	0	0.14740E-05	459396.7	3772782.0	381.3	4.50	0.93	4.88	YES	
L0000206	0	0.14740E-05	459398.7	3772782.0	381.3	4.50	0.93	4.88	YES	
L0000207	0	0.14740E-05	459400.7	3772782.1	381.3	4.50	0.93	4.88	YES	
L0000208	0	0.14740E-05	459402.7	3772782.1	381.4	4.50	0.93	4.88	YES	
L0000209	0	0.14740E-05	459404.7	3772782.2	381.4	4.50	0.93	4.88	YES	
L0000210	0	0.14740E-05	459406.7	3772782.2	381.4	4.50	0.93	4.88	YES	
L0000211	0	0.14740E-05	459408.7	3772782.3	381.4	4.50	0.93	4.88	YES	
L0000212	0	0.14740E-05	459410.7	3772782.4	381.4	4.50	0.93	4.88	YES	
L0000213	0	0.14740E-05	459412.7	3772782.4	381.4	4.50	0.93	4.88	YES	
L0000214	0	0.14740E-05	459414.7	3772782.5	381.4	4.50	0.93	4.88	YES	
L0000215	0	0.14740E-05	459416.7	3772782.5	381.4	4.50	0.93	4.88	YES	
L0000216	0	0.14740E-05	459418.7	3772782.6	381.4	4.50	0.93			

4.88	YES						
L0000217	0	0.14740E-05	459420.7	3772782.6	381.4	4.50	0.93
4.88	YES						
L0000218	0	0.14740E-05	459422.7	3772782.7	381.5	4.50	0.93
4.88	YES						
L0000219	0	0.14740E-05	459424.7	3772782.8	381.5	4.50	0.93
4.88	YES						
L0000220	0	0.14740E-05	459426.7	3772782.8	381.5	4.50	0.93
4.88	YES						
L0000221	0	0.14740E-05	459428.7	3772782.9	381.5	4.50	0.93
4.88	YES						
L0000222	0	0.14740E-05	459430.7	3772782.9	381.4	4.50	0.93
4.88	YES						
L0000223	0	0.14740E-05	459432.7	3772783.0	381.4	4.50	0.93
4.88	YES						
L0000224	0	0.14740E-05	459434.7	3772783.0	381.4	4.50	0.93
4.88	YES						
L0000225	0	0.14740E-05	459436.7	3772783.1	381.4	4.50	0.93
4.88	YES						
L0000226	0	0.14740E-05	459438.7	3772783.1	381.4	4.50	0.93
4.88	YES						
L0000227	0	0.14740E-05	459440.7	3772783.2	381.4	4.50	0.93
4.88	YES						
L0000228	0	0.14740E-05	459442.7	3772783.3	381.4	4.50	0.93
4.88	YES						
L0000229	0	0.14740E-05	459444.7	3772783.3	381.4	4.50	0.93
4.88	YES						
L0000230	0	0.14740E-05	459446.7	3772783.4	381.4	4.50	0.93
4.88	YES						
L0000231	0	0.14740E-05	459448.7	3772783.4	381.4	4.50	0.93
4.88	YES						
L0000232	0	0.14740E-05	459450.7	3772783.5	381.4	4.50	0.93
4.88	YES						
L0000233	0	0.14740E-05	459452.7	3772783.5	381.4	4.50	0.93
4.88	YES						
L0000234	0	0.14740E-05	459454.7	3772783.6	381.4	4.50	0.93
4.88	YES						
L0000235	0	0.14740E-05	459456.7	3772783.7	381.4	4.50	0.93
4.88	YES						
L0000236	0	0.14740E-05	459458.7	3772783.7	381.4	4.50	0.93
4.88	YES						
L0000237	0	0.14740E-05	459460.7	3772783.8	381.4	4.50	0.93
4.88	YES						
L0000238	0	0.14740E-05	459462.7	3772783.8	381.4	4.50	0.93
4.88	YES						
L0000239	0	0.14740E-05	459464.7	3772783.9	381.4	4.50	0.93
4.88	YES						
L0000240	0	0.14740E-05	459466.7	3772783.9	381.4	4.50	0.93

4.88 YES

↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20

*** AERMET - VERSION 16216 *** ***

*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	URBAN EMISSION RATE SCALAR VARY
L0000241	0	0.14740E-05	459468.7	3772784.0	381.4	4.50	0.93	4.88	YES	
L0000242	0	0.14740E-05	459470.7	3772784.1	381.4	4.50	0.93	4.88	YES	
L0000243	0	0.14740E-05	459472.7	3772784.1	381.4	4.50	0.93	4.88	YES	
L0000244	0	0.14740E-05	459474.7	3772784.2	381.4	4.50	0.93	4.88	YES	
L0000245	0	0.14740E-05	459476.7	3772784.2	381.4	4.50	0.93	4.88	YES	
L0000246	0	0.14740E-05	459478.7	3772784.3	381.4	4.50	0.93	4.88	YES	
L0000247	0	0.14740E-05	459480.7	3772784.3	381.4	4.50	0.93	4.88	YES	
L0000248	0	0.14740E-05	459482.7	3772784.4	381.4	4.50	0.93	4.88	YES	
L0000249	0	0.14740E-05	459484.7	3772784.4	381.4	4.50	0.93	4.88	YES	
L0000250	0	0.14740E-05	459486.7	3772784.5	381.4	4.50	0.93	4.88	YES	
L0000251	0	0.14740E-05	459488.7	3772784.6	381.4	4.50	0.93	4.88	YES	
L0000252	0	0.14740E-05	459490.7	3772784.6	381.4	4.50	0.93	4.88	YES	
L0000253	0	0.14740E-05	459492.7	3772784.7	381.4	4.50	0.93	4.88	YES	
L0000254	0	0.14740E-05	459494.7	3772784.7	381.4	4.50	0.93			

4.88	YES							
L0000255		0	0.14740E-05	459496.7	3772784.8	381.4	4.50	0.93
4.88	YES							
L0000256		0	0.14740E-05	459498.7	3772784.8	381.4	4.50	0.93
4.88	YES							
L0000257		0	0.14740E-05	459500.7	3772784.9	381.4	4.50	0.93
4.88	YES							
L0000258		0	0.14740E-05	459502.7	3772785.0	381.4	4.50	0.93
4.88	YES							
L0000259		0	0.14740E-05	459504.7	3772785.0	381.5	4.50	0.93
4.88	YES							
L0000260		0	0.14740E-05	459506.7	3772785.1	381.5	4.50	0.93
4.88	YES							
L0000261		0	0.14740E-05	459508.6	3772785.1	381.5	4.50	0.93
4.88	YES							
L0000262		0	0.14740E-05	459510.6	3772785.2	381.5	4.50	0.93
4.88	YES							
L0000263		0	0.14740E-05	459512.6	3772785.2	381.5	4.50	0.93
4.88	YES							
L0000264		0	0.14740E-05	459514.6	3772785.3	381.5	4.50	0.93
4.88	YES							
L0000265		0	0.14740E-05	459516.6	3772785.4	381.5	4.50	0.93
4.88	YES							
L0000266		0	0.14740E-05	459518.6	3772785.4	381.5	4.50	0.93
4.88	YES							
L0000267		0	0.14740E-05	459520.6	3772785.5	381.5	4.50	0.93
4.88	YES							
L0000268		0	0.14740E-05	459522.6	3772785.5	381.5	4.50	0.93
4.88	YES							
L0000269		0	0.14740E-05	459524.6	3772785.6	381.6	4.50	0.93
4.88	YES							
L0000270		0	0.14740E-05	459526.6	3772785.6	381.6	4.50	0.93
4.88	YES							
L0000271		0	0.14740E-05	459528.6	3772785.7	381.6	4.50	0.93
4.88	YES							
L0000272		0	0.14740E-05	459530.6	3772785.8	381.6	4.50	0.93
4.88	YES							
L0000273		0	0.14740E-05	459532.6	3772785.8	381.6	4.50	0.93
4.88	YES							
L0000274		0	0.14740E-05	459534.6	3772785.9	381.6	4.50	0.93
4.88	YES							
L0000275		0	0.14740E-05	459536.6	3772785.9	381.6	4.50	0.93
4.88	YES							
L0000276		0	0.14740E-05	459538.6	3772786.0	381.6	4.50	0.93
4.88	YES							
L0000277		0	0.14740E-05	459540.6	3772786.0	381.6	4.50	0.93
4.88	YES							
L0000278		0	0.14740E-05	459542.6	3772786.1	381.6	4.50	0.93

```
4.88     YES
 L0000279         0   0.14740E-05  459544.6 3772786.1   381.6     4.50     0.93
4.88     YES
 L0000280         0   0.14740E-05  459546.6 3772786.2   381.6     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0000281         0   0.14740E-05  459548.6 3772786.3   381.6     4.50     0.93
4.88     YES
 L0000282         0   0.14740E-05  459550.6 3772786.3   381.7     4.50     0.93
4.88     YES
 L0000283         0   0.14740E-05  459552.6 3772786.4   381.7     4.50     0.93
4.88     YES
 L0000284         0   0.14740E-05  459554.6 3772786.4   381.7     4.50     0.93
4.88     YES
 L0000285         0   0.14740E-05  459556.6 3772786.5   381.7     4.50     0.93
4.88     YES
 L0000286         0   0.14740E-05  459558.6 3772786.5   381.7     4.50     0.93
4.88     YES
 L0000287         0   0.14740E-05  459560.6 3772786.6   381.7     4.50     0.93
4.88     YES
 L0000288         0   0.14740E-05  459562.6 3772786.7   381.7     4.50     0.93
4.88     YES
 L0000289         0   0.14740E-05  459564.6 3772786.7   381.7     4.50     0.93
4.88     YES
 L0000290         0   0.14740E-05  459566.6 3772786.8   381.7     4.50     0.93
4.88     YES
 L0000291         0   0.14740E-05  459568.6 3772786.8   381.7     4.50     0.93
4.88     YES
 L0000292         0   0.14740E-05  459570.6 3772786.9   381.7     4.50     0.93
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4.88	YES							
L0000293		0	0.14740E-05	459572.6	3772786.9	381.7	4.50	0.93
4.88	YES							
L0000294		0	0.14740E-05	459574.6	3772787.0	381.7	4.50	0.93
4.88	YES							
L0000295		0	0.14740E-05	459576.6	3772787.1	381.7	4.50	0.93
4.88	YES							
L0000296		0	0.14740E-05	459578.6	3772787.1	381.7	4.50	0.93
4.88	YES							
L0000297		0	0.14740E-05	459580.6	3772787.2	381.7	4.50	0.93
4.88	YES							
L0000298		0	0.14740E-05	459582.6	3772787.2	381.7	4.50	0.93
4.88	YES							
L0000299		0	0.14740E-05	459584.6	3772787.3	381.7	4.50	0.93
4.88	YES							
L0000300		0	0.14740E-05	459586.6	3772787.3	381.7	4.50	0.93
4.88	YES							
L0000301		0	0.14740E-05	459588.6	3772787.4	381.7	4.50	0.93
4.88	YES							
L0000302		0	0.14740E-05	459590.6	3772787.4	381.7	4.50	0.93
4.88	YES							
L0000303		0	0.14740E-05	459592.6	3772787.5	381.7	4.50	0.93
4.88	YES							
L0000304		0	0.14740E-05	459594.6	3772787.6	381.7	4.50	0.93
4.88	YES							
L0000305		0	0.14740E-05	459596.6	3772787.6	381.7	4.50	0.93
4.88	YES							
L0000306		0	0.14740E-05	459598.6	3772787.7	381.7	4.50	0.93
4.88	YES							
L0000307		0	0.14740E-05	459600.6	3772787.7	381.7	4.50	0.93
4.88	YES							
L0000308		0	0.14740E-05	459602.6	3772787.8	381.7	4.50	0.93
4.88	YES							
L0000309		0	0.14740E-05	459604.6	3772787.8	381.7	4.50	0.93
4.88	YES							
L0000310		0	0.14740E-05	459606.6	3772787.9	381.7	4.50	0.93
4.88	YES							
L0000311		0	0.14740E-05	459608.6	3772788.0	381.8	4.50	0.93
4.88	YES							
L0000312		0	0.14740E-05	459610.6	3772788.0	381.8	4.50	0.93
4.88	YES							
L0000313		0	0.14740E-05	459612.6	3772788.1	381.8	4.50	0.93
4.88	YES							
L0000314		0	0.14740E-05	459614.6	3772788.1	381.8	4.50	0.93
4.88	YES							
L0000315		0	0.14740E-05	459616.6	3772788.2	381.8	4.50	0.93
4.88	YES							
L0000316		0	0.14740E-05	459618.6	3772788.2	381.8	4.50	0.93

```
4.88     YES
 L0000317         0   0.14740E-05  459620.6 3772788.3   381.8     4.50     0.93
4.88     YES
 L0000318         0   0.14740E-05  459622.6 3772788.4   381.8     4.50     0.93
4.88     YES
 L0000319         0   0.14740E-05  459624.6 3772788.4   381.8     4.50     0.93
4.88     YES
 L0000320         0   0.14740E-05  459626.6 3772788.5   381.8     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0000321         0   0.14740E-05  459628.6 3772788.5   381.8     4.50     0.93
4.88     YES
 L0000322         0   0.14740E-05  459630.6 3772788.6   381.8     4.50     0.93
4.88     YES
 L0000323         0   0.14740E-05  459632.6 3772788.6   381.8     4.50     0.93
4.88     YES
 L0000324         0   0.14740E-05  459634.6 3772788.7   381.9     4.50     0.93
4.88     YES
 L0000325         0   0.14740E-05  459636.6 3772788.7   381.9     4.50     0.93
4.88     YES
 L0000326         0   0.14740E-05  459638.6 3772788.8   381.9     4.50     0.93
4.88     YES
 L0000327         0   0.14740E-05  459640.6 3772788.9   381.9     4.50     0.93
4.88     YES
 L0000328         0   0.14740E-05  459642.6 3772788.9   381.9     4.50     0.93
4.88     YES
 L0000329         0   0.14740E-05  459644.6 3772789.0   381.9     4.50     0.93
4.88     YES
 L0000330         0   0.14740E-05  459646.6 3772789.0   381.9     4.50     0.93
```

4.88	YES							
L0000331		0	0.14740E-05	459648.6	3772789.1	381.9	4.50	0.93
4.88	YES							
L0000332		0	0.14740E-05	459650.6	3772789.1	381.9	4.50	0.93
4.88	YES							
L0000333		0	0.14740E-05	459652.6	3772789.2	382.0	4.50	0.93
4.88	YES							
L0000334		0	0.14740E-05	459654.6	3772789.3	382.0	4.50	0.93
4.88	YES							
L0000335		0	0.14740E-05	459656.6	3772789.3	382.0	4.50	0.93
4.88	YES							
L0000336		0	0.14740E-05	459658.6	3772789.4	382.0	4.50	0.93
4.88	YES							
L0000337		0	0.14740E-05	459660.6	3772789.4	382.0	4.50	0.93
4.88	YES							
L0000338		0	0.14740E-05	459662.6	3772789.5	382.0	4.50	0.93
4.88	YES							
L0000339		0	0.14740E-05	459664.6	3772789.5	382.0	4.50	0.93
4.88	YES							
L0000340		0	0.14740E-05	459666.6	3772789.6	382.0	4.50	0.93
4.88	YES							
L0000341		0	0.14740E-05	459668.6	3772789.7	382.0	4.50	0.93
4.88	YES							
L0000342		0	0.14740E-05	459670.6	3772789.7	382.0	4.50	0.93
4.88	YES							
L0000343		0	0.14740E-05	459672.6	3772789.8	382.0	4.50	0.93
4.88	YES							
L0000344		0	0.14740E-05	459674.6	3772789.8	382.1	4.50	0.93
4.88	YES							
L0000345		0	0.14740E-05	459676.6	3772789.9	382.1	4.50	0.93
4.88	YES							
L0000346		0	0.14740E-05	459678.6	3772789.9	382.1	4.50	0.93
4.88	YES							
L0000347		0	0.14740E-05	459680.6	3772790.0	382.1	4.50	0.93
4.88	YES							
L0000348		0	0.14740E-05	459682.6	3772790.0	382.1	4.50	0.93
4.88	YES							
L0000349		0	0.14740E-05	459684.6	3772790.1	382.1	4.50	0.93
4.88	YES							
L0000350		0	0.14740E-05	459686.6	3772790.2	382.1	4.50	0.93
4.88	YES							
L0000351		0	0.14740E-05	459688.6	3772790.2	382.1	4.50	0.93
4.88	YES							
L0000352		0	0.14740E-05	459690.6	3772790.3	382.1	4.50	0.93
4.88	YES							
L0000353		0	0.14740E-05	459692.6	3772790.3	382.1	4.50	0.93
4.88	YES							
L0000354		0	0.14740E-05	459694.6	3772790.4	382.1	4.50	0.93

4.88 YES
L0000355 0 0.14740E-05 459696.6 3772790.4 382.1 4.50 0.93
4.88 YES
L0000356 0 0.14740E-05 459698.6 3772790.5 382.1 4.50 0.93
4.88 YES
L0000357 0 0.14740E-05 459700.6 3772790.6 382.1 4.50 0.93
4.88 YES
L0000358 0 0.14740E-05 459702.6 3772790.6 382.1 4.50 0.93
4.88 YES
L0000359 0 0.14740E-05 459704.6 3772790.7 382.1 4.50 0.93
4.88 YES
L0000360 0 0.14740E-05 459706.6 3772790.7 382.1 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0000361	0	0.14740E-05	459708.6	3772790.8	382.1	4.50	0.93	4.88	YES	
L0000362	0	0.14740E-05	459710.6	3772790.8	382.1	4.50	0.93	4.88	YES	
L0000363	0	0.14740E-05	459712.6	3772790.9	382.1	4.50	0.93	4.88	YES	
L0000364	0	0.14740E-05	459714.6	3772791.0	382.1	4.50	0.93	4.88	YES	
L0000365	0	0.14740E-05	459716.6	3772791.0	382.1	4.50	0.93	4.88	YES	
L0000366	0	0.14740E-05	459718.6	3772791.1	382.0	4.50	0.93	4.88	YES	
L0000367	0	0.14740E-05	459720.6	3772791.1	382.0	4.50	0.93	4.88	YES	
L0000368	0	0.14740E-05	459722.6	3772791.2	382.0	4.50	0.93			

4.88	YES							
L0000369		0	0.14740E-05	459724.6	3772791.2	382.0	4.50	0.93
4.88	YES							
L0000370		0	0.14740E-05	459726.6	3772791.3	382.0	4.50	0.93
4.88	YES							
L0000371		0	0.14740E-05	459728.6	3772791.3	382.0	4.50	0.93
4.88	YES							
L0000372		0	0.14740E-05	459730.6	3772791.4	382.0	4.50	0.93
4.88	YES							
L0000373		0	0.14740E-05	459732.6	3772791.5	382.0	4.50	0.93
4.88	YES							
L0000374		0	0.14740E-05	459734.6	3772791.5	382.0	4.50	0.93
4.88	YES							
L0000375		0	0.14740E-05	459736.6	3772791.6	382.0	4.50	0.93
4.88	YES							
L0000376		0	0.14740E-05	459738.6	3772791.6	382.0	4.50	0.93
4.88	YES							
L0000377		0	0.14740E-05	459740.6	3772791.7	382.0	4.50	0.93
4.88	YES							
L0000378		0	0.14740E-05	459742.6	3772791.7	382.0	4.50	0.93
4.88	YES							
L0000379		0	0.14740E-05	459744.6	3772791.8	382.0	4.50	0.93
4.88	YES							
L0000380		0	0.14740E-05	459746.6	3772791.9	382.0	4.50	0.93
4.88	YES							
L0000381		0	0.14740E-05	459748.6	3772791.9	382.0	4.50	0.93
4.88	YES							
L0000382		0	0.14740E-05	459750.6	3772792.0	382.0	4.50	0.93
4.88	YES							
L0000383		0	0.14740E-05	459752.6	3772792.0	382.0	4.50	0.93
4.88	YES							
L0000384		0	0.14740E-05	459754.6	3772792.1	382.0	4.50	0.93
4.88	YES							
L0000385		0	0.14740E-05	459756.6	3772792.1	382.0	4.50	0.93
4.88	YES							
L0000386		0	0.14740E-05	459758.5	3772792.2	382.0	4.50	0.93
4.88	YES							
L0000387		0	0.14740E-05	459760.5	3772792.3	382.0	4.50	0.93
4.88	YES							
L0000388		0	0.14740E-05	459762.5	3772792.3	382.0	4.50	0.93
4.88	YES							
L0000389		0	0.14740E-05	459764.5	3772792.4	382.0	4.50	0.93
4.88	YES							
L0000390		0	0.14740E-05	459766.5	3772792.4	382.0	4.50	0.93
4.88	YES							
L0000391		0	0.14740E-05	459768.5	3772792.5	382.1	4.50	0.93
4.88	YES							
L0000392		0	0.14740E-05	459770.5	3772792.5	382.1	4.50	0.93

4.88 YES
L0000393 0 0.14740E-05 459772.5 3772792.6 382.1 4.50 0.93
4.88 YES
L0000394 0 0.14740E-05 459774.5 3772792.6 382.1 4.50 0.93
4.88 YES
L0000395 0 0.14740E-05 459776.5 3772792.7 382.1 4.50 0.93
4.88 YES
L0000396 0 0.14740E-05 459778.5 3772792.8 382.1 4.50 0.93
4.88 YES
L0000397 0 0.14740E-05 459780.5 3772792.8 382.1 4.50 0.93
4.88 YES
L0000398 0 0.14740E-05 459782.5 3772792.9 382.1 4.50 0.93
4.88 YES
L0000399 0 0.14740E-05 459784.5 3772792.9 382.1 4.50 0.93
4.88 YES
L0000400 0 0.14740E-05 459786.5 3772793.0 382.2 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000401	0	0.14740E-05	459788.5	3772793.0	382.2	4.50	0.93	4.88	YES	
L0000402	0	0.14740E-05	459790.5	3772793.1	382.2	4.50	0.93	4.88	YES	
L0000403	0	0.14740E-05	459792.5	3772793.2	382.2	4.50	0.93	4.88	YES	
L0000404	0	0.14740E-05	459794.5	3772793.2	382.2	4.50	0.93	4.88	YES	
L0000405	0	0.14740E-05	459796.5	3772793.3	382.2	4.50	0.93	4.88	YES	
L0000406	0	0.14740E-05	459798.5	3772793.3	382.2	4.50	0.93			

4.88	YES						
L0000407	0	0.14740E-05	459800.5	3772793.4	382.2	4.50	0.93
4.88	YES						
L0000408	0	0.14740E-05	459802.5	3772793.4	382.2	4.50	0.93
4.88	YES						
L0000409	0	0.14740E-05	459804.5	3772793.5	382.2	4.50	0.93
4.88	YES						
L0000410	0	0.14740E-05	459806.5	3772793.6	382.2	4.50	0.93
4.88	YES						
L0000411	0	0.14740E-05	459808.5	3772793.6	382.2	4.50	0.93
4.88	YES						
L0000412	0	0.14740E-05	459810.5	3772793.7	382.2	4.50	0.93
4.88	YES						
L0000413	0	0.14740E-05	459812.5	3772793.7	382.2	4.50	0.93
4.88	YES						
L0000414	0	0.14740E-05	459814.5	3772793.8	382.2	4.50	0.93
4.88	YES						
L0000415	0	0.14740E-05	459816.5	3772793.8	382.2	4.50	0.93
4.88	YES						
L0000416	0	0.14740E-05	459818.5	3772793.9	382.2	4.50	0.93
4.88	YES						
L0000417	0	0.14740E-05	459820.5	3772794.0	382.2	4.50	0.93
4.88	YES						
L0000418	0	0.14740E-05	459822.5	3772794.0	382.2	4.50	0.93
4.88	YES						
L0000419	0	0.14740E-05	459824.5	3772794.1	382.2	4.50	0.93
4.88	YES						
L0000420	0	0.14740E-05	459826.5	3772794.1	382.2	4.50	0.93
4.88	YES						
L0000421	0	0.14740E-05	459828.5	3772794.2	382.2	4.50	0.93
4.88	YES						
L0000422	0	0.14740E-05	459830.5	3772794.2	382.2	4.50	0.93
4.88	YES						
L0000423	0	0.14740E-05	459832.5	3772794.3	382.2	4.50	0.93
4.88	YES						
L0000424	0	0.14740E-05	459834.5	3772794.3	382.2	4.50	0.93
4.88	YES						
L0000425	0	0.14740E-05	459836.5	3772794.4	382.2	4.50	0.93
4.88	YES						
L0000426	0	0.14740E-05	459838.5	3772794.5	382.2	4.50	0.93
4.88	YES						
L0000427	0	0.14740E-05	459840.5	3772794.5	382.2	4.50	0.93
4.88	YES						
L0000428	0	0.14740E-05	459842.5	3772794.6	382.2	4.50	0.93
4.88	YES						
L0000429	0	0.14740E-05	459844.5	3772794.6	382.2	4.50	0.93
4.88	YES						
L0000430	0	0.14740E-05	459846.5	3772794.7	382.1	4.50	0.93

```
4.88     YES
 L0000431         0   0.14740E-05  459848.5 3772794.7   382.1     4.50     0.93
4.88     YES
 L0000432         0   0.14740E-05  459850.5 3772794.8   382.1     4.50     0.93
4.88     YES
 L0000433         0   0.14740E-05  459852.5 3772794.9   382.1     4.50     0.93
4.88     YES
 L0000434         0   0.14740E-05  459854.5 3772794.9   382.1     4.50     0.93
4.88     YES
 L0000435         0   0.14740E-05  459856.5 3772795.0   382.1     4.50     0.93
4.88     YES
 L0000436         0   0.14740E-05  459858.5 3772795.0   382.1     4.50     0.93
4.88     YES
 L0000437         0   0.14740E-05  459860.5 3772795.1   382.1     4.50     0.93
4.88     YES
 L0000438         0   0.14740E-05  459862.5 3772795.1   382.1     4.50     0.93
4.88     YES
 L0000439         0   0.14740E-05  459864.5 3772795.2   382.1     4.50     0.93
4.88     YES
 L0000440         0   0.14740E-05  459866.5 3772795.3   382.2     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0000441         0   0.14740E-05  459868.5 3772795.3   382.2     4.50     0.93
4.88     YES
 L0000442         0   0.14740E-05  459870.5 3772795.4   382.2     4.50     0.93
4.88     YES
 L0000443         0   0.14740E-05  459872.5 3772795.4   382.2     4.50     0.93
4.88     YES
 L0000444         0   0.14740E-05  459874.5 3772795.5   382.2     4.50     0.93
```

4.88	YES							
L0000445		0	0.14740E-05	459876.5	3772795.5	382.2	4.50	0.93
4.88	YES							
L0000446		0	0.14740E-05	459878.5	3772795.6	382.2	4.50	0.93
4.88	YES							
L0000447		0	0.14740E-05	459880.5	3772795.6	382.2	4.50	0.93
4.88	YES							
L0000448		0	0.14740E-05	459882.5	3772795.7	382.2	4.50	0.93
4.88	YES							
L0000449		0	0.14740E-05	459884.5	3772795.8	382.2	4.50	0.93
4.88	YES							
L0000450		0	0.14740E-05	459886.5	3772795.8	382.2	4.50	0.93
4.88	YES							
L0000451		0	0.14740E-05	459888.5	3772795.9	382.2	4.50	0.93
4.88	YES							
L0000452		0	0.14740E-05	459890.5	3772795.9	382.2	4.50	0.93
4.88	YES							
L0000453		0	0.14740E-05	459892.5	3772796.0	382.2	4.50	0.93
4.88	YES							
L0000454		0	0.14740E-05	459894.5	3772796.0	382.2	4.50	0.93
4.88	YES							
L0000455		0	0.14740E-05	459896.5	3772796.1	382.2	4.50	0.93
4.88	YES							
L0000456		0	0.14740E-05	459898.5	3772796.2	382.2	4.50	0.93
4.88	YES							
L0000457		0	0.14740E-05	459900.5	3772796.2	382.3	4.50	0.93
4.88	YES							
L0000458		0	0.14740E-05	459902.5	3772796.3	382.3	4.50	0.93
4.88	YES							
L0000459		0	0.14740E-05	459904.5	3772796.3	382.3	4.50	0.93
4.88	YES							
L0000460		0	0.14740E-05	459906.5	3772796.4	382.3	4.50	0.93
4.88	YES							
L0000461		0	0.14740E-05	459908.5	3772796.4	382.3	4.50	0.93
4.88	YES							
L0000462		0	0.14740E-05	459910.5	3772796.5	382.3	4.50	0.93
4.88	YES							
L0000463		0	0.14740E-05	459912.5	3772796.6	382.3	4.50	0.93
4.88	YES							
L0000464		0	0.14740E-05	459914.5	3772796.6	382.3	4.50	0.93
4.88	YES							
L0000465		0	0.14740E-05	459916.5	3772796.7	382.3	4.50	0.93
4.88	YES							
L0000466		0	0.14740E-05	459918.5	3772796.7	382.4	4.50	0.93
4.88	YES							
L0000467		0	0.14740E-05	459920.5	3772796.8	382.4	4.50	0.93
4.88	YES							
L0000468		0	0.14740E-05	459922.5	3772796.8	382.4	4.50	0.93

4.88 YES
L0000469 0 0.14740E-05 459924.5 3772796.9 382.4 4.50 0.93
4.88 YES
L0000470 0 0.14740E-05 459926.5 3772796.9 382.4 4.50 0.93
4.88 YES
L0000471 0 0.14740E-05 459928.5 3772797.0 382.4 4.50 0.93
4.88 YES
L0000472 0 0.14740E-05 459930.5 3772797.1 382.4 4.50 0.93
4.88 YES
L0000473 0 0.14740E-05 459932.5 3772797.1 382.4 4.50 0.93
4.88 YES
L0000474 0 0.14740E-05 459934.5 3772797.2 382.4 4.50 0.93
4.88 YES
L0000475 0 0.14740E-05 459936.5 3772797.2 382.5 4.50 0.93
4.88 YES
L0000476 0 0.14740E-05 459938.5 3772797.3 382.5 4.50 0.93
4.88 YES
L0000477 0 0.14740E-05 459940.5 3772797.3 382.5 4.50 0.93
4.88 YES
L0000478 0 0.14740E-05 459942.5 3772797.4 382.5 4.50 0.93
4.88 YES
L0000479 0 0.14740E-05 459944.5 3772797.5 382.5 4.50 0.93
4.88 YES
L0000480 0 0.14740E-05 459946.5 3772797.5 382.5 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE SCALAR VARY BY
L0000481	0	0.14740E-05	459948.5	3772797.6	382.6	4.50	0.93	4.88	YES
L0000482	0	0.14740E-05	459950.5	3772797.6	382.6	4.50	0.93		

4.88 YES							
L0000483	0	0.14740E-05	459952.5	3772797.7	382.6	4.50	0.93
4.88 YES							
L0000484	0	0.14740E-05	459954.5	3772797.7	382.6	4.50	0.93
4.88 YES							
L0000485	0	0.14740E-05	459956.5	3772797.8	382.6	4.50	0.93
4.88 YES							
L0000486	0	0.14740E-05	459958.5	3772797.9	382.6	4.50	0.93
4.88 YES							
L0000487	0	0.14740E-05	459960.5	3772797.9	382.7	4.50	0.93
4.88 YES							
L0000488	0	0.14740E-05	459962.5	3772798.0	382.7	4.50	0.93
4.88 YES							
L0000489	0	0.14740E-05	459964.5	3772798.0	382.7	4.50	0.93
4.88 YES							
L0000490	0	0.14740E-05	459966.5	3772798.1	382.7	4.50	0.93
4.88 YES							
L0000491	0	0.14740E-05	459968.5	3772798.1	382.7	4.50	0.93
4.88 YES							
L0000492	0	0.14740E-05	459970.5	3772798.2	382.7	4.50	0.93
4.88 YES							
L0000493	0	0.14740E-05	459972.5	3772798.2	382.8	4.50	0.93
4.88 YES							
L0000494	0	0.14740E-05	459974.5	3772798.3	382.8	4.50	0.93
4.88 YES							
L0000495	0	0.14740E-05	459976.5	3772798.4	382.8	4.50	0.93
4.88 YES							
L0000496	0	0.14740E-05	459978.5	3772798.4	382.8	4.50	0.93
4.88 YES							
L0000497	0	0.14740E-05	459980.5	3772798.5	382.8	4.50	0.93
4.88 YES							
L0000498	0	0.14740E-05	459982.5	3772798.5	382.9	4.50	0.93
4.88 YES							
L0000499	0	0.14740E-05	459984.5	3772798.6	382.9	4.50	0.93
4.88 YES							
L0000500	0	0.14740E-05	459986.5	3772798.6	382.9	4.50	0.93
4.88 YES							
L0000501	0	0.14740E-05	459988.5	3772798.7	382.9	4.50	0.93
4.88 YES							
L0000502	0	0.14740E-05	459990.5	3772798.8	382.9	4.50	0.93
4.88 YES							
L0000503	0	0.14740E-05	459992.5	3772798.8	382.9	4.50	0.93
4.88 YES							
L0000504	0	0.14740E-05	459994.5	3772798.9	382.9	4.50	0.93
4.88 YES							
L0000505	0	0.14740E-05	459996.5	3772798.9	382.9	4.50	0.93
4.88 YES							
L0000506	0	0.14740E-05	459998.5	3772799.0	383.0	4.50	0.93

```
4.88     YES
 L0000507         0   0.14740E-05  460000.5 3772799.0   383.0     4.50     0.93
4.88     YES
 L0000508         0   0.14740E-05  460002.5 3772799.1   383.0     4.50     0.93
4.88     YES
 L0000509         0   0.14740E-05  460004.5 3772799.2   383.0     4.50     0.93
4.88     YES
 L0000510         0   0.14740E-05  460006.5 3772799.2   383.0     4.50     0.93
4.88     YES
 L0000511         0   0.14740E-05  460008.5 3772799.3   383.0     4.50     0.93
4.88     YES
 L0000512         0   0.14740E-05  460010.4 3772799.3   383.0     4.50     0.93
4.88     YES
 L0000513         0   0.14740E-05  460012.4 3772799.4   383.0     4.50     0.93
4.88     YES
 L0000514         0   0.14740E-05  460014.4 3772799.4   383.1     4.50     0.93
4.88     YES
 L0000515         0   0.14740E-05  460016.4 3772799.5   383.1     4.50     0.93
4.88     YES
 L0000516         0   0.14740E-05  460018.4 3772799.6   383.1     4.50     0.93
4.88     YES
 L0000517         0   0.14740E-05  460020.4 3772799.6   383.1     4.50     0.93
4.88     YES
 L0000518         0   0.14740E-05  460022.4 3772799.7   383.1     4.50     0.93
4.88     YES
 L0000519         0   0.14740E-05  460024.4 3772799.7   383.1     4.50     0.93
4.88     YES
 L0000520         0   0.14740E-05  460026.4 3772799.8   383.1     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
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L0000521	0	0.14740E-05	460028.4	3772799.8	383.1	4.50	0.93
4.88	YES						
L0000522	0	0.14740E-05	460030.4	3772799.9	383.1	4.50	0.93
4.88	YES						
L0000523	0	0.14740E-05	460032.4	3772799.9	383.1	4.50	0.93
4.88	YES						
L0000524	0	0.14740E-05	460034.4	3772800.0	383.1	4.50	0.93
4.88	YES						
L0000525	0	0.14740E-05	460036.4	3772800.1	383.1	4.50	0.93
4.88	YES						
L0000526	0	0.14740E-05	460038.4	3772800.1	383.1	4.50	0.93
4.88	YES						
L0000527	0	0.14740E-05	460040.4	3772800.2	383.2	4.50	0.93
4.88	YES						
L0000528	0	0.14740E-05	460042.4	3772800.2	383.2	4.50	0.93
4.88	YES						
L0000529	0	0.14740E-05	460044.4	3772800.3	383.2	4.50	0.93
4.88	YES						
L0000530	0	0.14740E-05	460046.4	3772800.3	383.2	4.50	0.93
4.88	YES						
L0000531	0	0.14740E-05	460048.4	3772800.4	383.2	4.50	0.93
4.88	YES						
L0000532	0	0.14740E-05	460050.4	3772800.5	383.2	4.50	0.93
4.88	YES						
L0000533	0	0.14740E-05	460052.4	3772800.5	383.2	4.50	0.93
4.88	YES						
L0000534	0	0.14740E-05	460054.4	3772800.6	383.2	4.50	0.93
4.88	YES						
L0000535	0	0.14740E-05	460056.4	3772800.6	383.2	4.50	0.93
4.88	YES						
L0000536	0	0.14740E-05	460058.4	3772800.7	383.2	4.50	0.93
4.88	YES						
L0000537	0	0.14740E-05	460060.4	3772800.7	383.2	4.50	0.93
4.88	YES						
L0000538	0	0.14740E-05	460062.4	3772800.8	383.2	4.50	0.93
4.88	YES						
L0000539	0	0.14740E-05	460064.4	3772800.9	383.2	4.50	0.93
4.88	YES						
L0000540	0	0.14740E-05	460066.4	3772800.9	383.2	4.50	0.93
4.88	YES						
L0000541	0	0.14740E-05	460068.4	3772801.0	383.2	4.50	0.93
4.88	YES						
L0000542	0	0.14740E-05	460070.4	3772801.0	383.2	4.50	0.93
4.88	YES						
L0000543	0	0.14740E-05	460072.4	3772801.1	383.2	4.50	0.93
4.88	YES						
L0000544	0	0.14740E-05	460074.4	3772801.1	383.2	4.50	0.93

4.88 YES
L0000545 0 0.14740E-05 460076.4 3772801.2 383.2 4.50 0.93
4.88 YES
L0000546 0 0.14740E-05 460078.4 3772801.2 383.2 4.50 0.93
4.88 YES
L0000547 0 0.14740E-05 460080.4 3772801.3 383.1 4.50 0.93
4.88 YES
L0000548 0 0.14740E-05 460082.4 3772801.4 383.1 4.50 0.93
4.88 YES
L0000549 0 0.14740E-05 460084.4 3772801.4 383.1 4.50 0.93
4.88 YES
L0000550 0 0.14740E-05 460086.4 3772801.5 383.1 4.50 0.93
4.88 YES
L0000551 0 0.14740E-05 460088.4 3772801.5 383.1 4.50 0.93
4.88 YES
L0000552 0 0.14740E-05 460090.4 3772801.6 383.1 4.50 0.93
4.88 YES
L0000553 0 0.14740E-05 460092.4 3772801.6 383.1 4.50 0.93
4.88 YES
L0000554 0 0.14740E-05 460094.4 3772801.7 383.1 4.50 0.93
4.88 YES
L0000555 0 0.14740E-05 460096.4 3772801.8 383.1 4.50 0.93
4.88 YES
L0000556 0 0.14740E-05 460098.4 3772801.8 383.1 4.50 0.93
4.88 YES
L0000557 0 0.14740E-05 460100.4 3772801.9 383.1 4.50 0.93
4.88 YES
L0000558 0 0.14740E-05 460102.4 3772801.9 383.1 4.50 0.93
4.88 YES
L0000559 0 0.14740E-05 460104.4 3772802.0 383.1 4.50 0.93
4.88 YES
L0000560 0 0.14740E-05 460106.4 3772802.0 383.1 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER PART.	EMISSION RATE (GRAMS/SEC)	X	Y	BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0000561	0	0.14740E-05	460108.4	3772802.1	383.1	4.50	0.93	4.88 YES
L0000562	0	0.14740E-05	460110.4	3772802.2	383.1	4.50	0.93	4.88 YES
L0000563	0	0.14740E-05	460112.4	3772802.2	383.1	4.50	0.93	4.88 YES
L0000564	0	0.14740E-05	460114.4	3772802.3	383.1	4.50	0.93	4.88 YES
L0000565	0	0.14740E-05	460116.4	3772802.3	383.1	4.50	0.93	4.88 YES
L0000566	0	0.14740E-05	460118.4	3772802.4	383.1	4.50	0.93	4.88 YES
L0000567	0	0.14740E-05	460120.4	3772802.4	383.2	4.50	0.93	4.88 YES
L0000568	0	0.14740E-05	460122.4	3772802.5	383.2	4.50	0.93	4.88 YES
L0000569	0	0.14740E-05	460124.4	3772802.5	383.2	4.50	0.93	4.88 YES
L0000570	0	0.14740E-05	460126.4	3772802.6	383.2	4.50	0.93	4.88 YES
L0000571	0	0.14740E-05	460128.4	3772802.7	383.2	4.50	0.93	4.88 YES
L0000572	0	0.14740E-05	460130.4	3772802.7	383.2	4.50	0.93	4.88 YES
L0000573	0	0.14740E-05	460132.4	3772802.8	383.2	4.50	0.93	4.88 YES
L0000574	0	0.14740E-05	460134.4	3772802.8	383.2	4.50	0.93	4.88 YES
L0000575	0	0.14740E-05	460136.4	3772802.9	383.2	4.50	0.93	4.88 YES
L0000576	0	0.14740E-05	460138.4	3772802.9	383.2	4.50	0.93	4.88 YES
L0000577	0	0.14740E-05	460140.4	3772803.0	383.2	4.50	0.93	4.88 YES
L0000578	0	0.14740E-05	460142.4	3772803.1	383.2	4.50	0.93	4.88 YES
L0000579	0	0.14740E-05	460144.4	3772803.1	383.2	4.50	0.93	4.88 YES
L0000580	0	0.14740E-05	460146.4	3772803.2	383.2	4.50	0.93	4.88 YES
L0000581	0	0.14740E-05	460148.4	3772803.2	383.2	4.50	0.93	4.88 YES
L0000582	0	0.14740E-05	460150.4	3772803.3	383.2	4.50	0.93	

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4.88     YES
 L0000583         0   0.14740E-05  460152.4 3772803.3   383.2     4.50     0.93
4.88     YES
 L0000584         0   0.14740E-05  460154.4 3772803.4   383.2     4.50     0.93
4.88     YES
 L0000585         0   0.14740E-05  460156.4 3772803.5   383.3     4.50     0.93
4.88     YES
 L0000586         0   0.14740E-05  460158.4 3772803.5   383.3     4.50     0.93
4.88     YES
 L0000587         0   0.14740E-05  460160.4 3772803.6   383.3     4.50     0.93
4.88     YES
 L0000588         0   0.14740E-05  460162.4 3772803.6   383.3     4.50     0.93
4.88     YES
 L0000589         0   0.14740E-05  460164.4 3772803.7   383.3     4.50     0.93
4.88     YES
 L0000590         0   0.14740E-05  460166.4 3772803.7   383.3     4.50     0.93
4.88     YES
 L0000591         0   0.14740E-05  460168.4 3772803.8   383.3     4.50     0.93
4.88     YES
 L0000592         0   0.14740E-05  460170.4 3772803.8   383.3     4.50     0.93
4.88     YES
 L0000593         0   0.14740E-05  460172.4 3772803.9   383.3     4.50     0.93
4.88     YES
 L0000594         0   0.14740E-05  460174.4 3772804.0   383.3     4.50     0.93
4.88     YES
 L0000595         0   0.14740E-05  460176.4 3772804.0   383.3     4.50     0.93
4.88     YES
 L0000596         0   0.14740E-05  460178.4 3772804.1   383.3     4.50     0.93
4.88     YES
 L0000597         0   0.14740E-05  460180.4 3772804.1   383.3     4.50     0.93
4.88     YES
 L0000598         0   0.14740E-05  460182.4 3772804.2   383.3     4.50     0.93
4.88     YES
 L0000599         0   0.14740E-05  460184.4 3772804.2   383.3     4.50     0.93
4.88     YES
 L0000600         0   0.14740E-05  460186.4 3772804.3   383.3     4.50     0.93
4.88     YES
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000601	0	0.14740E-05	460188.4	3772804.4	383.3	4.50	0.93	4.88	YES	
L0000602	0	0.14740E-05	460190.4	3772804.4	383.3	4.50	0.93	4.88	YES	
L0000603	0	0.14740E-05	460192.4	3772804.5	383.3	4.50	0.93	4.88	YES	
L0000604	0	0.14740E-05	460194.4	3772804.5	383.3	4.50	0.93	4.88	YES	
L0000605	0	0.14740E-05	460196.4	3772804.6	383.3	4.50	0.93	4.88	YES	
L0000606	0	0.14740E-05	460198.4	3772804.6	383.3	4.50	0.93	4.88	YES	
L0000607	0	0.14740E-05	460200.4	3772804.7	383.3	4.50	0.93	4.88	YES	
L0000608	0	0.14740E-05	460202.4	3772804.8	383.3	4.50	0.93	4.88	YES	
L0000609	0	0.14740E-05	460204.4	3772804.8	383.3	4.50	0.93	4.88	YES	
L0000610	0	0.14740E-05	460206.4	3772804.9	383.3	4.50	0.93	4.88	YES	
L0000611	0	0.14740E-05	460208.4	3772804.9	383.3	4.50	0.93	4.88	YES	
L0000612	0	0.14740E-05	460210.4	3772805.0	383.3	4.50	0.93	4.88	YES	
L0000613	0	0.14740E-05	460212.4	3772805.0	383.3	4.50	0.93	4.88	YES	
L0000614	0	0.14740E-05	460214.4	3772805.1	383.3	4.50	0.93	4.88	YES	
L0000615	0	0.14740E-05	460216.4	3772805.1	383.3	4.50	0.93	4.88	YES	
L0000616	0	0.14740E-05	460218.4	3772805.2	383.3	4.50	0.93	4.88	YES	
L0000617	0	0.14740E-05	460220.4	3772805.3	383.2	4.50	0.93	4.88	YES	
L0000618	0	0.14740E-05	460222.4	3772805.3	383.2	4.50	0.93	4.88	YES	
L0000619	0	0.14740E-05	460224.4	3772805.4	383.2	4.50	0.93	4.88	YES	
L0000620	0	0.14740E-05	460226.4	3772805.4	383.2	4.50	0.93			

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4.88     YES
 L0000621         0   0.14740E-05  460228.4 3772805.5   383.2     4.50     0.93
4.88     YES
 L0000622         0   0.14740E-05  460230.4 3772805.5   383.2     4.50     0.93
4.88     YES
 L0000623         0   0.14740E-05  460232.4 3772805.6   383.2     4.50     0.93
4.88     YES
 L0000624         0   0.14740E-05  460234.4 3772805.7   383.2     4.50     0.93
4.88     YES
 L0000625         0   0.14740E-05  460236.4 3772805.7   383.2     4.50     0.93
4.88     YES
 L0000626         0   0.14740E-05  460238.4 3772805.8   383.2     4.50     0.93
4.88     YES
 L0000627         0   0.14740E-05  460240.4 3772805.8   383.2     4.50     0.93
4.88     YES
 L0000628         0   0.14740E-05  460242.4 3772805.9   383.2     4.50     0.93
4.88     YES
 L0000629         0   0.14740E-05  460244.4 3772805.9   383.2     4.50     0.93
4.88     YES
 L0000630         0   0.14740E-05  460246.4 3772806.0   383.2     4.50     0.93
4.88     YES
 L0000631         0   0.14740E-05  460248.4 3772806.1   383.2     4.50     0.93
4.88     YES
 L0000632         0   0.14740E-05  460250.4 3772806.1   383.2     4.50     0.93
4.88     YES
 L0000633         0   0.14740E-05  460252.4 3772806.2   383.2     4.50     0.93
4.88     YES
 L0000634         0   0.14740E-05  460254.4 3772806.2   383.2     4.50     0.93
4.88     YES
 L0000635         0   0.14740E-05  460256.4 3772806.3   383.2     4.50     0.93
4.88     YES
 L0000636         0   0.14740E-05  460258.3 3772806.3   383.2     4.50     0.93
4.88     YES
 L0000637         0   0.14740E-05  460260.3 3772806.4   383.2     4.50     0.93
4.88     YES
 L0000638         0   0.14740E-05  460262.3 3772806.5   383.2     4.50     0.93
4.88     YES
 L0000639         0   0.14740E-05  460264.3 3772806.5   383.2     4.50     0.93
4.88     YES
 L0000640         0   0.14740E-05  460266.3 3772806.6   383.2     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0000641	0	0.14740E-05	460268.3	3772806.6	383.2	4.50	0.93	4.88	YES	
L0000642	0	0.14740E-05	460270.3	3772806.7	383.2	4.50	0.93	4.88	YES	
L0000643	0	0.14740E-05	460272.3	3772806.7	383.2	4.50	0.93	4.88	YES	
L0000644	0	0.14740E-05	460274.3	3772806.8	383.2	4.50	0.93	4.88	YES	
L0000645	0	0.14740E-05	460276.3	3772806.8	383.2	4.50	0.93	4.88	YES	
L0000646	0	0.14740E-05	460278.3	3772806.9	383.2	4.50	0.93	4.88	YES	
L0000647	0	0.14740E-05	460280.3	3772807.0	383.2	4.50	0.93	4.88	YES	
L0000648	0	0.14740E-05	460282.3	3772807.0	383.2	4.50	0.93	4.88	YES	
L0000649	0	0.14740E-05	460284.3	3772807.1	383.2	4.50	0.93	4.88	YES	
L0000650	0	0.14740E-05	460286.3	3772807.1	383.2	4.50	0.93	4.88	YES	
L0000651	0	0.14740E-05	460288.3	3772807.2	383.2	4.50	0.93	4.88	YES	
L0000652	0	0.14740E-05	460290.3	3772807.2	383.2	4.50	0.93	4.88	YES	
L0000653	0	0.14740E-05	460292.3	3772807.3	383.2	4.50	0.93	4.88	YES	
L0000654	0	0.14740E-05	460294.3	3772807.4	383.2	4.50	0.93	4.88	YES	
L0000655	0	0.14740E-05	460296.3	3772807.4	383.2	4.50	0.93	4.88	YES	
L0000656	0	0.14740E-05	460298.3	3772807.5	383.2	4.50	0.93	4.88	YES	
L0000657	0	0.14740E-05	460300.3	3772807.5	383.2	4.50	0.93	4.88	YES	
L0000658	0	0.14740E-05	460302.3	3772807.6	383.2	4.50	0.93			

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4.88     YES
 L0000659         0   0.14740E-05  460304.3 3772807.6   383.2     4.50     0.93
4.88     YES
 L0000660         0   0.14740E-05  460306.3 3772807.7   383.2     4.50     0.93
4.88     YES
 L0000661         0   0.14740E-05  460308.3 3772807.8   383.2     4.50     0.93
4.88     YES
 L0000662         0   0.14740E-05  460310.3 3772807.8   383.2     4.50     0.93
4.88     YES
 L0000663         0   0.14740E-05  460312.3 3772807.9   383.2     4.50     0.93
4.88     YES
 L0000664         0   0.14740E-05  460314.3 3772807.9   383.2     4.50     0.93
4.88     YES
 L0000665         0   0.14740E-05  460316.3 3772808.0   383.2     4.50     0.93
4.88     YES
 L0000666         0   0.14740E-05  460318.3 3772808.0   383.2     4.50     0.93
4.88     YES
 L0000667         0   0.14740E-05  460320.3 3772808.1   383.2     4.50     0.93
4.88     YES
 L0000668         0   0.14740E-05  460322.3 3772808.1   383.2     4.50     0.93
4.88     YES
 L0000669         0   0.14740E-05  460324.3 3772808.2   383.2     4.50     0.93
4.88     YES
 L0000670         0   0.14740E-05  460326.3 3772808.3   383.2     4.50     0.93
4.88     YES
 L0000671         0   0.14740E-05  460328.3 3772808.3   383.2     4.50     0.93
4.88     YES
 L0000672         0   0.14740E-05  460330.3 3772808.4   383.1     4.50     0.93
4.88     YES
 L0000673         0   0.14740E-05  460332.3 3772808.4   383.1     4.50     0.93
4.88     YES
 L0000674         0   0.14740E-05  460334.3 3772808.5   383.1     4.50     0.93
4.88     YES
 L0000675         0   0.14740E-05  460336.3 3772808.5   383.1     4.50     0.93
4.88     YES
 L0000676         0   0.14740E-05  460338.3 3772808.6   383.1     4.50     0.93
4.88     YES
 L0000677         0   0.14740E-05  460340.3 3772808.7   383.1     4.50     0.93
4.88     YES
 L0000678         0   0.14740E-05  460342.3 3772808.7   383.1     4.50     0.93
4.88     YES
 L0000679         0   0.14740E-05  460344.3 3772808.8   383.1     4.50     0.93
4.88     YES
 L0000680         0   0.14740E-05  460346.3 3772808.8   383.1     4.50     0.93
4.88     YES
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000681	0	0.14740E-05	460348.3	3772808.9	383.1	4.50	0.93	4.88	YES	
L0000682	0	0.14740E-05	460350.3	3772808.9	383.0	4.50	0.93	4.88	YES	
L0000683	0	0.14740E-05	460352.3	3772809.0	383.0	4.50	0.93	4.88	YES	
L0000684	0	0.14740E-05	460354.3	3772809.1	382.9	4.50	0.93	4.88	YES	
L0000685	0	0.14740E-05	460356.3	3772809.1	382.9	4.50	0.93	4.88	YES	
L0000686	0	0.14740E-05	460358.3	3772809.2	382.9	4.50	0.93	4.88	YES	
L0000687	0	0.14740E-05	460360.3	3772809.2	382.9	4.50	0.93	4.88	YES	
L0000688	0	0.14740E-05	460362.3	3772809.3	382.8	4.50	0.93	4.88	YES	
L0000689	0	0.14740E-05	460364.3	3772809.3	382.8	4.50	0.93	4.88	YES	
L0000690	0	0.14740E-05	460366.3	3772809.4	382.8	4.50	0.93	4.88	YES	
L0000691	0	0.14740E-05	460368.3	3772809.4	382.7	4.50	0.93	4.88	YES	
L0000692	0	0.14740E-05	460370.3	3772809.5	382.7	4.50	0.93	4.88	YES	
L0000693	0	0.14740E-05	460372.3	3772809.6	382.7	4.50	0.93	4.88	YES	
L0000694	0	0.14740E-05	460374.3	3772809.6	382.6	4.50	0.93	4.88	YES	
L0000695	0	0.14740E-05	460376.3	3772809.7	382.6	4.50	0.93	4.88	YES	
L0000696	0	0.14740E-05	460378.3	3772809.7	382.6	4.50	0.93			

4.88	YES							
L0000697		0	0.14740E-05	460380.3	3772809.8	382.5	4.50	0.93
4.88	YES							
L0000698		0	0.14740E-05	460382.3	3772809.8	382.5	4.50	0.93
4.88	YES							
L0000699		0	0.14740E-05	460384.3	3772809.9	382.5	4.50	0.93
4.88	YES							
L0000700		0	0.14740E-05	460386.3	3772810.0	382.4	4.50	0.93
4.88	YES							
L0000701		0	0.14740E-05	460388.3	3772810.0	382.4	4.50	0.93
4.88	YES							
L0000702		0	0.14740E-05	460390.3	3772810.1	382.4	4.50	0.93
4.88	YES							
L0000703		0	0.14740E-05	460392.3	3772810.1	382.3	4.50	0.93
4.88	YES							
L0000704		0	0.14740E-05	460394.3	3772810.2	382.3	4.50	0.93
4.88	YES							
L0000705		0	0.14740E-05	460396.3	3772810.2	382.3	4.50	0.93
4.88	YES							
L0000706		0	0.14740E-05	460398.3	3772810.3	382.2	4.50	0.93
4.88	YES							
L0000707		0	0.14740E-05	460400.3	3772810.4	382.2	4.50	0.93
4.88	YES							
L0000708		0	0.14740E-05	460402.3	3772810.4	382.2	4.50	0.93
4.88	YES							
L0000709		0	0.14740E-05	460404.3	3772810.5	382.2	4.50	0.93
4.88	YES							
L0000710		0	0.14740E-05	460406.3	3772810.5	382.2	4.50	0.93
4.88	YES							
L0000711		0	0.14740E-05	460408.3	3772810.6	382.2	4.50	0.93
4.88	YES							
L0000712		0	0.14740E-05	460410.3	3772810.6	382.2	4.50	0.93
4.88	YES							
L0000713		0	0.14740E-05	460412.3	3772810.7	382.2	4.50	0.93
4.88	YES							
L0000714		0	0.14740E-05	460414.3	3772810.8	382.1	4.50	0.93
4.88	YES							
L0000715		0	0.14740E-05	460416.3	3772810.8	382.1	4.50	0.93
4.88	YES							
L0000716		0	0.14740E-05	460418.3	3772810.9	382.1	4.50	0.93
4.88	YES							
L0000717		0	0.14740E-05	460420.3	3772810.9	382.1	4.50	0.93
4.88	YES							
L0000718		0	0.14740E-05	460422.3	3772811.0	382.1	4.50	0.93
4.88	YES							
L0000719		0	0.14740E-05	460424.3	3772811.0	382.1	4.50	0.93
4.88	YES							
L0000720		0	0.14740E-05	460426.3	3772811.1	382.1	4.50	0.93

4.88 YES
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0000721	0	0.14740E-05	460428.3	3772811.1	382.1	4.50	0.93	4.88	YES	
L0000722	0	0.14740E-05	460430.3	3772811.2	382.1	4.50	0.93	4.88	YES	
L0000723	0	0.14740E-05	460432.3	3772811.3	382.1	4.50	0.93	4.88	YES	
L0000724	0	0.14740E-05	460434.3	3772811.3	382.1	4.50	0.93	4.88	YES	
L0000725	0	0.14740E-05	460436.3	3772811.4	382.1	4.50	0.93	4.88	YES	
L0000726	0	0.14740E-05	460438.3	3772811.4	382.1	4.50	0.93	4.88	YES	
L0000727	0	0.14740E-05	460440.3	3772811.5	382.1	4.50	0.93	4.88	YES	
L0000728	0	0.14740E-05	460442.3	3772811.5	382.1	4.50	0.93	4.88	YES	
L0000729	0	0.14740E-05	460444.3	3772811.6	382.1	4.50	0.93	4.88	YES	
L0000730	0	0.14740E-05	460446.3	3772811.7	382.1	4.50	0.93	4.88	YES	
L0000731	0	0.14740E-05	460448.3	3772811.7	382.1	4.50	0.93	4.88	YES	
L0000732	0	0.14740E-05	460450.3	3772811.8	382.1	4.50	0.93	4.88	YES	
L0000733	0	0.14740E-05	460452.3	3772811.8	382.1	4.50	0.93	4.88	YES	
L0000734	0	0.14740E-05	460454.3	3772811.9	382.1	4.50	0.93			

4.88 YES							
L0000735	0	0.14740E-05	460456.3	3772811.9	382.1	4.50	0.93
4.88 YES							
L0000736	0	0.14740E-05	460458.3	3772812.0	382.1	4.50	0.93
4.88 YES							
L0000737	0	0.14740E-05	460460.3	3772812.1	382.1	4.50	0.93
4.88 YES							
L0000738	0	0.14740E-05	460462.3	3772812.1	382.1	4.50	0.93
4.88 YES							
L0000739	0	0.14740E-05	460464.3	3772812.2	382.1	4.50	0.93
4.88 YES							
L0000740	0	0.14740E-05	460466.3	3772812.2	382.1	4.50	0.93
4.88 YES							
L0000741	0	0.14740E-05	460468.3	3772812.3	382.1	4.50	0.93
4.88 YES							
L0000742	0	0.14740E-05	460470.3	3772812.3	382.1	4.50	0.93
4.88 YES							
L0000743	0	0.14740E-05	460472.3	3772812.4	382.1	4.50	0.93
4.88 YES							
L0000744	0	0.14740E-05	460474.3	3772812.4	382.1	4.50	0.93
4.88 YES							
L0000745	0	0.14740E-05	460476.3	3772812.5	382.2	4.50	0.93
4.88 YES							
L0000746	0	0.14740E-05	460478.3	3772812.6	382.2	4.50	0.93
4.88 YES							
L0000747	0	0.14740E-05	460480.3	3772812.6	382.2	4.50	0.93
4.88 YES							
L0000748	0	0.14740E-05	460482.3	3772812.7	382.2	4.50	0.93
4.88 YES							
L0000749	0	0.14740E-05	460484.3	3772812.7	382.2	4.50	0.93
4.88 YES							
L0000750	0	0.14740E-05	460486.3	3772812.8	382.2	4.50	0.93
4.88 YES							
L0000751	0	0.14740E-05	460488.3	3772812.8	382.2	4.50	0.93
4.88 YES							
L0000752	0	0.14740E-05	460490.3	3772812.9	382.2	4.50	0.93
4.88 YES							
L0000753	0	0.14740E-05	460492.3	3772813.0	382.2	4.50	0.93
4.88 YES							
L0000754	0	0.14740E-05	460494.3	3772813.0	382.2	4.50	0.93
4.88 YES							
L0000755	0	0.14740E-05	460496.3	3772813.1	382.2	4.50	0.93
4.88 YES							
L0000756	0	0.14740E-05	460498.3	3772813.1	382.3	4.50	0.93
4.88 YES							
L0000757	0	0.14740E-05	460500.3	3772813.2	382.3	4.50	0.93
4.88 YES							
L0000758	0	0.14740E-05	460502.3	3772813.2	382.3	4.50	0.93

4.88 YES
L0000759 0 0.14740E-05 460504.3 3772813.3 382.3 4.50 0.93
4.88 YES
L0000760 0 0.14740E-05 460506.3 3772813.4 382.3 4.50 0.93
4.88 YES
*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	URBAN EMISSION RATE SCALAR VARY
L0000761	0	0.14740E-05	460508.2	3772813.4	382.3	4.50	0.93	4.88	YES	
L0000762	0	0.14740E-05	460510.2	3772813.5	382.3	4.50	0.93	4.88	YES	
L0000763	0	0.14740E-05	460512.2	3772813.5	382.3	4.50	0.93	4.88	YES	
L0000764	0	0.14740E-05	460514.2	3772813.6	382.3	4.50	0.93	4.88	YES	
L0000765	0	0.14740E-05	460516.2	3772813.6	382.3	4.50	0.93	4.88	YES	
L0000766	0	0.14740E-05	460518.2	3772813.7	382.3	4.50	0.93	4.88	YES	
L0000767	0	0.14740E-05	460520.2	3772813.7	382.3	4.50	0.93	4.88	YES	
L0000768	0	0.14740E-05	460522.2	3772813.8	382.3	4.50	0.93	4.88	YES	
L0000769	0	0.14740E-05	460524.2	3772813.9	382.3	4.50	0.93	4.88	YES	
L0000770	0	0.14740E-05	460526.2	3772813.9	382.3	4.50	0.93	4.88	YES	
L0000771	0	0.14740E-05	460528.2	3772814.0	382.3	4.50	0.93	4.88	YES	
L0000772	0	0.14740E-05	460530.2	3772814.0	382.3	4.50	0.93			

4.88	YES						
L0000773	0	0.14740E-05	460532.2	3772814.1	382.3	4.50	0.93
4.88	YES						
L0000774	0	0.14740E-05	460534.2	3772814.1	382.3	4.50	0.93
4.88	YES						
L0000775	0	0.14740E-05	460536.2	3772814.2	382.3	4.50	0.93
4.88	YES						
L0000776	0	0.14740E-05	460538.2	3772814.3	382.3	4.50	0.93
4.88	YES						
L0000777	0	0.14740E-05	460540.2	3772814.3	382.3	4.50	0.93
4.88	YES						
L0000778	0	0.14740E-05	460542.2	3772814.4	382.3	4.50	0.93
4.88	YES						
L0000779	0	0.14740E-05	460544.2	3772814.4	382.3	4.50	0.93
4.88	YES						
L0000780	0	0.14740E-05	460546.2	3772814.5	382.3	4.50	0.93
4.88	YES						
L0000781	0	0.14740E-05	460548.2	3772814.5	382.3	4.50	0.93
4.88	YES						
L0000782	0	0.14740E-05	460550.2	3772814.6	382.3	4.50	0.93
4.88	YES						
L0000783	0	0.14740E-05	460552.2	3772814.7	382.3	4.50	0.93
4.88	YES						
L0000784	0	0.14740E-05	460554.2	3772814.7	382.3	4.50	0.93
4.88	YES						
L0000785	0	0.14740E-05	460556.2	3772814.8	382.3	4.50	0.93
4.88	YES						
L0000786	0	0.14740E-05	460558.2	3772814.8	382.3	4.50	0.93
4.88	YES						
L0000787	0	0.14740E-05	460560.2	3772814.9	382.3	4.50	0.93
4.88	YES						
L0000788	0	0.14740E-05	460562.2	3772814.9	382.3	4.50	0.93
4.88	YES						
L0000789	0	0.14740E-05	460564.2	3772815.0	382.3	4.50	0.93
4.88	YES						
L0000790	0	0.14740E-05	460566.2	3772815.0	382.3	4.50	0.93
4.88	YES						
L0000791	0	0.14740E-05	460568.2	3772815.1	382.3	4.50	0.93
4.88	YES						
L0000792	0	0.14740E-05	460570.2	3772815.2	382.3	4.50	0.93
4.88	YES						
L0000793	0	0.14740E-05	460572.2	3772815.2	382.3	4.50	0.93
4.88	YES						
L0000794	0	0.14740E-05	460574.2	3772815.3	382.3	4.50	0.93
4.88	YES						
L0000795	0	0.14740E-05	460576.2	3772815.3	382.3	4.50	0.93
4.88	YES						
L0000796	0	0.14740E-05	460578.2	3772815.4	382.3	4.50	0.93

```
4.88     YES
 L0000797         0   0.14740E-05  460580.2 3772815.4   382.3     4.50     0.93
4.88     YES
 L0000798         0   0.14740E-05  460582.2 3772815.5   382.3     4.50     0.93
4.88     YES
 L0000799         0   0.14740E-05  460584.2 3772815.6   382.3     4.50     0.93
4.88     YES
 L0000800         0   0.14740E-05  460586.2 3772815.6   382.3     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0000801         0   0.14740E-05  460588.2 3772815.7   382.3     4.50     0.93
4.88     YES
 L0000802         0   0.14740E-05  460590.2 3772815.7   382.3     4.50     0.93
4.88     YES
 L0000803         0   0.14740E-05  460592.2 3772815.8   382.4     4.50     0.93
4.88     YES
 L0000804         0   0.14740E-05  460594.2 3772815.8   382.4     4.50     0.93
4.88     YES
 L0000805         0   0.14740E-05  460596.2 3772815.9   382.4     4.50     0.93
4.88     YES
 L0000806         0   0.14740E-05  460598.2 3772816.0   382.4     4.50     0.93
4.88     YES
 L0000807         0   0.14740E-05  460600.2 3772816.0   382.4     4.50     0.93
4.88     YES
 L0000808         0   0.14740E-05  460602.2 3772816.1   382.4     4.50     0.93
4.88     YES
 L0000809         0   0.14740E-05  460604.2 3772816.1   382.4     4.50     0.93
4.88     YES
 L0000810         0   0.14740E-05  460606.2 3772816.2   382.3     4.50     0.93
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4.88 YES							
L0000811	0	0.14740E-05	460608.2	3772816.2	382.3	4.50	0.93
4.88 YES							
L0000812	0	0.14740E-05	460610.2	3772816.3	382.3	4.50	0.93
4.88 YES							
L0000813	0	0.14740E-05	460612.2	3772816.3	382.3	4.50	0.93
4.88 YES							
L0000814	0	0.14740E-05	460614.2	3772816.4	382.3	4.50	0.93
4.88 YES							
L0000815	0	0.14740E-05	460616.2	3772816.5	382.3	4.50	0.93
4.88 YES							
L0000816	0	0.14740E-05	460618.2	3772816.5	382.2	4.50	0.93
4.88 YES							
L0000817	0	0.14740E-05	460620.2	3772816.6	382.2	4.50	0.93
4.88 YES							
L0000818	0	0.14740E-05	460622.2	3772816.6	382.2	4.50	0.93
4.88 YES							
L0000819	0	0.14740E-05	460624.2	3772816.7	382.2	4.50	0.93
4.88 YES							
L0000820	0	0.14740E-05	460626.2	3772816.7	382.2	4.50	0.93
4.88 YES							
L0000821	0	0.14740E-05	460628.2	3772816.8	382.2	4.50	0.93
4.88 YES							
L0000822	0	0.14740E-05	460630.2	3772816.9	382.2	4.50	0.93
4.88 YES							
L0000823	0	0.14740E-05	460632.2	3772816.9	382.2	4.50	0.93
4.88 YES							
L0000824	0	0.14740E-05	460634.2	3772817.0	382.1	4.50	0.93
4.88 YES							
L0000825	0	0.14740E-05	460636.2	3772817.0	382.1	4.50	0.93
4.88 YES							
L0000826	0	0.14740E-05	460638.2	3772817.1	382.1	4.50	0.93
4.88 YES							
L0000827	0	0.14740E-05	460640.2	3772817.1	382.1	4.50	0.93
4.88 YES							
L0000828	0	0.14740E-05	460642.2	3772817.2	382.1	4.50	0.93
4.88 YES							
L0000829	0	0.14740E-05	460644.2	3772817.3	382.1	4.50	0.93
4.88 YES							
L0000830	0	0.14740E-05	460646.2	3772817.3	382.1	4.50	0.93
4.88 YES							
L0000831	0	0.14740E-05	460648.2	3772817.4	382.1	4.50	0.93
4.88 YES							
L0000832	0	0.14740E-05	460650.2	3772817.4	382.1	4.50	0.93
4.88 YES							
L0000833	0	0.14740E-05	460652.2	3772817.5	382.0	4.50	0.93
4.88 YES							
L0000834	0	0.14740E-05	460654.2	3772817.5	382.0	4.50	0.93

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4.88     YES
 L0000835         0   0.14740E-05  460656.2 3772817.6   382.0     4.50     0.93
4.88     YES
 L0000836         0   0.14740E-05  460658.2 3772817.6   382.0     4.50     0.93
4.88     YES
 L0000837         0   0.14740E-05  460660.2 3772817.7   382.0     4.50     0.93
4.88     YES
 L0000838         0   0.14740E-05  460662.2 3772817.8   382.0     4.50     0.93
4.88     YES
 L0000839         0   0.14740E-05  460664.2 3772817.8   382.0     4.50     0.93
4.88     YES
 L0000840         0   0.14740E-05  460666.2 3772817.9   382.0     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

 L0000841         0   0.14740E-05  460668.2 3772817.9   382.0     4.50     0.93
4.88     YES
 L0000842         0   0.14740E-05  460670.2 3772818.0   382.0     4.50     0.93
4.88     YES
 L0000843         0   0.14740E-05  460672.2 3772818.0   382.0     4.50     0.93
4.88     YES
 L0000844         0   0.14740E-05  460674.2 3772818.1   382.0     4.50     0.93
4.88     YES
 L0000845         0   0.14740E-05  460676.2 3772818.2   382.0     4.50     0.93
4.88     YES
 L0000846         0   0.14740E-05  460678.2 3772818.2   382.0     4.50     0.93
4.88     YES
 L0000847         0   0.14740E-05  460680.2 3772818.3   382.0     4.50     0.93
4.88     YES
 L0000848         0   0.14740E-05  460682.2 3772818.3   382.0     4.50     0.93
```

4.88	YES							
L0000849		0	0.14740E-05	460684.2	3772818.4	382.0	4.50	0.93
4.88	YES							
L0000850		0	0.14740E-05	460686.2	3772818.4	382.0	4.50	0.93
4.88	YES							
L0000851		0	0.14740E-05	460688.2	3772818.5	382.0	4.50	0.93
4.88	YES							
L0000852		0	0.14740E-05	460690.2	3772818.6	381.9	4.50	0.93
4.88	YES							
L0000853		0	0.14740E-05	460692.2	3772818.6	381.9	4.50	0.93
4.88	YES							
L0000854		0	0.14740E-05	460694.2	3772818.7	381.9	4.50	0.93
4.88	YES							
L0000855		0	0.14740E-05	460696.2	3772818.7	381.9	4.50	0.93
4.88	YES							
L0000856		0	0.14740E-05	460698.2	3772818.8	381.9	4.50	0.93
4.88	YES							
L0000857		0	0.14740E-05	460700.2	3772818.8	381.9	4.50	0.93
4.88	YES							
L0000858		0	0.14740E-05	460702.2	3772818.9	381.9	4.50	0.93
4.88	YES							
L0000859		0	0.14740E-05	460704.2	3772819.0	381.9	4.50	0.93
4.88	YES							
L0000860		0	0.14740E-05	460706.2	3772819.0	381.9	4.50	0.93
4.88	YES							
L0000861		0	0.14740E-05	460708.2	3772819.1	381.9	4.50	0.93
4.88	YES							
L0000862		0	0.14740E-05	460710.2	3772819.1	381.9	4.50	0.93
4.88	YES							
L0000863		0	0.14740E-05	460712.2	3772819.2	381.9	4.50	0.93
4.88	YES							
L0000864		0	0.14740E-05	460714.2	3772819.2	381.9	4.50	0.93
4.88	YES							
L0000865		0	0.14740E-05	460716.2	3772819.3	381.9	4.50	0.93
4.88	YES							
L0000866		0	0.14740E-05	460718.2	3772819.3	381.9	4.50	0.93
4.88	YES							
L0000867		0	0.14740E-05	460720.2	3772819.4	381.9	4.50	0.93
4.88	YES							
L0000868		0	0.14740E-05	460722.2	3772819.5	381.9	4.50	0.93
4.88	YES							
L0000869		0	0.14740E-05	460724.2	3772819.5	381.9	4.50	0.93
4.88	YES							
L0000870		0	0.14740E-05	460726.2	3772819.6	381.9	4.50	0.93
4.88	YES							
L0000871		0	0.14740E-05	460728.2	3772819.6	381.9	4.50	0.93
4.88	YES							
L0000872		0	0.14740E-05	460730.2	3772819.7	381.9	4.50	0.93

4.88 YES
L0000873 0 0.14740E-05 460732.2 3772819.7 381.9 4.50 0.93
4.88 YES
L0000874 0 0.14740E-05 460734.2 3772819.8 381.9 4.50 0.93
4.88 YES
L0000875 0 0.14740E-05 460736.2 3772819.9 381.9 4.50 0.93
4.88 YES
L0000876 0 0.14740E-05 460738.2 3772819.9 381.9 4.50 0.93
4.88 YES
L0000877 0 0.14740E-05 460740.2 3772820.0 381.9 4.50 0.93
4.88 YES
L0000878 0 0.14740E-05 460742.2 3772820.0 381.9 4.50 0.93
4.88 YES
L0000879 0 0.14740E-05 460744.2 3772820.1 381.9 4.50 0.93
4.88 YES
L0000880 0 0.14740E-05 460746.2 3772820.1 381.9 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000881	0	0.14740E-05	460748.2	3772820.2	381.9	4.50	0.93	4.88	YES	
L0000882	0	0.14740E-05	460750.2	3772820.3	381.9	4.50	0.93	4.88	YES	
L0000883	0	0.14740E-05	460752.2	3772820.3	381.9	4.50	0.93	4.88	YES	
L0000884	0	0.14740E-05	460754.2	3772820.4	381.9	4.50	0.93	4.88	YES	
L0000885	0	0.14740E-05	460756.2	3772820.4	381.9	4.50	0.93	4.88	YES	
L0000886	0	0.14740E-05	460758.1	3772820.5	381.9	4.50	0.93			

4.88	YES							
L0000887		0	0.14740E-05	460760.1	3772820.5	381.9	4.50	0.93
4.88	YES							
L0000888		0	0.14740E-05	460762.1	3772820.6	381.9	4.50	0.93
4.88	YES							
L0000889		0	0.14740E-05	460764.1	3772820.6	381.9	4.50	0.93
4.88	YES							
L0000890		0	0.14740E-05	460766.1	3772820.7	381.9	4.50	0.93
4.88	YES							
L0000891		0	0.14740E-05	460768.1	3772820.8	381.9	4.50	0.93
4.88	YES							
L0000892		0	0.14740E-05	460770.1	3772820.8	382.0	4.50	0.93
4.88	YES							
L0000893		0	0.14740E-05	460772.1	3772820.9	382.0	4.50	0.93
4.88	YES							
L0000894		0	0.14740E-05	460774.1	3772820.9	382.0	4.50	0.93
4.88	YES							
L0000895		0	0.14740E-05	460776.1	3772821.0	382.0	4.50	0.93
4.88	YES							
L0000896		0	0.14740E-05	460778.1	3772821.0	382.0	4.50	0.93
4.88	YES							
L0000897		0	0.14740E-05	460780.1	3772821.1	382.0	4.50	0.93
4.88	YES							
L0000898		0	0.14740E-05	460782.1	3772821.2	382.0	4.50	0.93
4.88	YES							
L0000899		0	0.14740E-05	460784.1	3772821.2	382.0	4.50	0.93
4.88	YES							
L0000900		0	0.14740E-05	460786.1	3772821.3	382.0	4.50	0.93
4.88	YES							
L0000901		0	0.14740E-05	460788.1	3772821.3	382.0	4.50	0.93
4.88	YES							
L0000902		0	0.14740E-05	460790.1	3772821.4	382.0	4.50	0.93
4.88	YES							
L0000903		0	0.14740E-05	460792.1	3772821.4	382.0	4.50	0.93
4.88	YES							
L0000904		0	0.14740E-05	460794.1	3772821.5	382.0	4.50	0.93
4.88	YES							
L0000905		0	0.14740E-05	460796.1	3772821.6	382.0	4.50	0.93
4.88	YES							
L0000906		0	0.14740E-05	460798.1	3772821.6	382.0	4.50	0.93
4.88	YES							
L0000907		0	0.14740E-05	460800.1	3772821.7	382.0	4.50	0.93
4.88	YES							
L0000908		0	0.14740E-05	460802.1	3772821.7	382.0	4.50	0.93
4.88	YES							
L0000909		0	0.14740E-05	460804.1	3772821.8	382.0	4.50	0.93
4.88	YES							
L0000910		0	0.14740E-05	460806.1	3772821.8	382.1	4.50	0.93

```
4.88     YES
 L0000911         0   0.14740E-05  460808.1 3772821.9   382.1     4.50     0.93
4.88     YES
 L0000912         0   0.14740E-05  460810.1 3772821.9   382.1     4.50     0.93
4.88     YES
 L0000913         0   0.14740E-05  460812.1 3772822.0   382.1     4.50     0.93
4.88     YES
 L0000914         0   0.14740E-05  460814.1 3772822.1   382.1     4.50     0.93
4.88     YES
 L0000915         0   0.14740E-05  460816.1 3772822.1   382.1     4.50     0.93
4.88     YES
 L0000916         0   0.14740E-05  460818.1 3772822.2   382.1     4.50     0.93
4.88     YES
 L0000917         0   0.14740E-05  460820.1 3772822.2   382.1     4.50     0.93
4.88     YES
 L0000918         0   0.14740E-05  460822.1 3772822.3   382.1     4.50     0.93
4.88     YES
 L0000919         0   0.14740E-05  460824.1 3772822.3   382.1     4.50     0.93
4.88     YES
 L0000920         0   0.14740E-05  460826.1 3772822.4   382.1     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0000921         0   0.14740E-05  460828.1 3772822.5   382.1     4.50     0.93
4.88     YES
 L0000922         0   0.14740E-05  460830.1 3772822.5   382.1     4.50     0.93
4.88     YES
 L0000923         0   0.14740E-05  460832.1 3772822.6   382.1     4.50     0.93
4.88     YES
 L0000924         0   0.14740E-05  460834.1 3772822.6   382.1     4.50     0.93
```

4.88	YES							
L0000925		0	0.14740E-05	460836.1	3772822.7	382.1	4.50	0.93
4.88	YES							
L0000926		0	0.14740E-05	460838.1	3772822.7	382.1	4.50	0.93
4.88	YES							
L0000927		0	0.14740E-05	460840.1	3772822.8	382.1	4.50	0.93
4.88	YES							
L0000928		0	0.14740E-05	460842.1	3772822.9	382.1	4.50	0.93
4.88	YES							
L0000929		0	0.14740E-05	460844.1	3772822.9	382.1	4.50	0.93
4.88	YES							
L0000930		0	0.14740E-05	460846.1	3772823.0	382.1	4.50	0.93
4.88	YES							
L0000931		0	0.14740E-05	460848.1	3772823.0	382.1	4.50	0.93
4.88	YES							
L0000932		0	0.14740E-05	460850.1	3772823.1	382.1	4.50	0.93
4.88	YES							
L0000933		0	0.14740E-05	460852.1	3772823.1	382.1	4.50	0.93
4.88	YES							
L0000934		0	0.14740E-05	460854.1	3772823.2	382.1	4.50	0.93
4.88	YES							
L0000935		0	0.14740E-05	460856.1	3772823.2	382.1	4.50	0.93
4.88	YES							
L0000936		0	0.14740E-05	460858.1	3772823.3	382.1	4.50	0.93
4.88	YES							
L0000937		0	0.14740E-05	460860.1	3772823.4	382.1	4.50	0.93
4.88	YES							
L0000938		0	0.14740E-05	460862.1	3772823.4	382.1	4.50	0.93
4.88	YES							
L0000939		0	0.14740E-05	460864.1	3772823.5	382.1	4.50	0.93
4.88	YES							
L0000940		0	0.14740E-05	460866.1	3772823.5	382.1	4.50	0.93
4.88	YES							
L0000941		0	0.14740E-05	460868.1	3772823.6	382.1	4.50	0.93
4.88	YES							
L0000942		0	0.14740E-05	460870.1	3772823.6	382.1	4.50	0.93
4.88	YES							
L0000943		0	0.14740E-05	460872.1	3772823.7	382.1	4.50	0.93
4.88	YES							
L0000944		0	0.14740E-05	460874.1	3772823.8	382.1	4.50	0.93
4.88	YES							
L0000945		0	0.14740E-05	460876.1	3772823.8	382.1	4.50	0.93
4.88	YES							
L0000946		0	0.14740E-05	460878.1	3772823.9	382.1	4.50	0.93
4.88	YES							
L0000947		0	0.14740E-05	460880.1	3772823.9	382.1	4.50	0.93
4.88	YES							
L0000948		0	0.14740E-05	460882.1	3772824.0	382.1	4.50	0.93

```
4.88     YES
 L0000949         0   0.14740E-05  460884.1 3772824.0   382.1     4.50     0.93
4.88     YES
 L0000950         0   0.14740E-05  460886.1 3772824.1   382.1     4.50     0.93
4.88     YES
 L0000951         0   0.14740E-05  460888.1 3772824.2   382.1     4.50     0.93
4.88     YES
 L0000952         0   0.14740E-05  460890.1 3772824.2   382.1     4.50     0.93
4.88     YES
 L0000953         0   0.14740E-05  460892.1 3772824.3   382.1     4.50     0.93
4.88     YES
 L0000954         0   0.14740E-05  460894.1 3772824.3   382.1     4.50     0.93
4.88     YES
 L0000955         0   0.14740E-05  460896.1 3772824.4   382.1     4.50     0.93
4.88     YES
 L0000956         0   0.14740E-05  460898.1 3772824.4   382.1     4.50     0.93
4.88     YES
 L0000957         0   0.14740E-05  460900.1 3772824.5   382.1     4.50     0.93
4.88     YES
 L0000958         0   0.14740E-05  460902.1 3772824.6   382.1     4.50     0.93
4.88     YES
 L0000959         0   0.14740E-05  460904.1 3772824.6   382.1     4.50     0.93
4.88     YES
 L0000960         0   0.14740E-05  460906.1 3772824.7   382.1     4.50     0.93
4.88     YES
```


*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000961	0	0.14740E-05	460908.1	3772824.7	382.1	4.50	0.93	4.88	YES	
L0000962	0	0.14740E-05	460910.1	3772824.8	382.1	4.50	0.93			

4.88	YES						
L0000963	0	0.14740E-05	460912.1	3772824.8	382.1	4.50	0.93
4.88	YES						
L0000964	0	0.14740E-05	460914.1	3772824.9	382.1	4.50	0.93
4.88	YES						
L0000965	0	0.14740E-05	460916.1	3772824.9	382.1	4.50	0.93
4.88	YES						
L0000966	0	0.14740E-05	460918.1	3772825.0	382.1	4.50	0.93
4.88	YES						
L0000967	0	0.14740E-05	460920.1	3772825.1	382.1	4.50	0.93
4.88	YES						
L0000968	0	0.14740E-05	460922.1	3772825.1	382.1	4.50	0.93
4.88	YES						
L0000969	0	0.14740E-05	460924.1	3772825.2	382.1	4.50	0.93
4.88	YES						
L0000970	0	0.14740E-05	460926.1	3772825.2	382.1	4.50	0.93
4.88	YES						
L0000971	0	0.14740E-05	460928.1	3772825.3	382.1	4.50	0.93
4.88	YES						
L0000972	0	0.14740E-05	460930.1	3772825.3	382.1	4.50	0.93
4.88	YES						
L0000973	0	0.14740E-05	460932.1	3772825.4	382.1	4.50	0.93
4.88	YES						
L0000974	0	0.14740E-05	460934.1	3772825.5	382.1	4.50	0.93
4.88	YES						
L0000975	0	0.14740E-05	460936.1	3772825.5	382.1	4.50	0.93
4.88	YES						
L0000976	0	0.14740E-05	460938.1	3772825.6	382.1	4.50	0.93
4.88	YES						
L0000977	0	0.14740E-05	460940.1	3772825.6	382.1	4.50	0.93
4.88	YES						
L0000978	0	0.14740E-05	460942.1	3772825.7	382.1	4.50	0.93
4.88	YES						
L0000979	0	0.14740E-05	460944.1	3772825.7	382.1	4.50	0.93
4.88	YES						
L0000980	0	0.14740E-05	460946.1	3772825.8	382.1	4.50	0.93
4.88	YES						
L0000981	0	0.14740E-05	460948.1	3772825.9	382.1	4.50	0.93
4.88	YES						
L0000982	0	0.14740E-05	460950.1	3772825.9	382.1	4.50	0.93
4.88	YES						
L0000983	0	0.14740E-05	460952.1	3772826.0	382.1	4.50	0.93
4.88	YES						
L0000984	0	0.14740E-05	460954.1	3772826.0	382.1	4.50	0.93
4.88	YES						
L0000985	0	0.14740E-05	460956.1	3772826.1	382.1	4.50	0.93
4.88	YES						
L0000986	0	0.14740E-05	460958.1	3772826.1	382.1	4.50	0.93

```
4.88     YES
 L0000987         0   0.14740E-05  460960.1 3772826.2   382.1     4.50     0.93
4.88     YES
 L0000988         0   0.14740E-05  460962.1 3772826.2   382.1     4.50     0.93
4.88     YES
 L0000989         0   0.14740E-05  460964.1 3772826.3   382.1     4.50     0.93
4.88     YES
 L0000990         0   0.14740E-05  460966.1 3772826.4   382.1     4.50     0.93
4.88     YES
 L0000991         0   0.14740E-05  460968.1 3772826.4   382.1     4.50     0.93
4.88     YES
 L0000992         0   0.14740E-05  460970.1 3772826.5   382.1     4.50     0.93
4.88     YES
 L0000993         0   0.14740E-05  460972.1 3772826.5   382.1     4.50     0.93
4.88     YES
 L0000994         0   0.14740E-05  460974.1 3772826.6   382.1     4.50     0.93
4.88     YES
 L0000995         0   0.14740E-05  460976.1 3772826.6   382.1     4.50     0.93
4.88     YES
 L0000996         0   0.14740E-05  460978.1 3772826.7   382.1     4.50     0.93
4.88     YES
 L0000997         0   0.14740E-05  460980.1 3772826.8   382.1     4.50     0.93
4.88     YES
 L0000998         0   0.14740E-05  460982.1 3772826.8   382.1     4.50     0.93
4.88     YES
 L0000999         0   0.14740E-05  460984.1 3772826.9   382.1     4.50     0.93
4.88     YES
 L0001000         0   0.14740E-05  460986.1 3772826.9   382.1     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
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L0001001	0	0.14740E-05	460988.1	3772827.0	382.1	4.50	0.93	4.88 YES
L0001002	0	0.14740E-05	460990.1	3772827.0	382.1	4.50	0.93	4.88 YES
L0001003	0	0.14740E-05	460992.1	3772827.1	382.1	4.50	0.93	4.88 YES
L0001004	0	0.14740E-05	460994.1	3772827.2	382.1	4.50	0.93	4.88 YES
L0001005	0	0.14740E-05	460996.1	3772827.2	382.1	4.50	0.93	4.88 YES
L0001006	0	0.14740E-05	460998.1	3772827.3	382.1	4.50	0.93	4.88 YES
L0001007	0	0.14740E-05	461000.1	3772827.3	382.1	4.50	0.93	4.88 YES
L0001008	0	0.14740E-05	461002.1	3772827.4	382.1	4.50	0.93	4.88 YES
L0001009	0	0.14740E-05	461004.1	3772827.4	382.2	4.50	0.93	4.88 YES
L0001010	0	0.14740E-05	461006.1	3772827.5	382.2	4.50	0.93	4.88 YES
L0001011	0	0.14740E-05	461008.0	3772827.5	382.2	4.50	0.93	4.88 YES
L0001012	0	0.14740E-05	461010.0	3772827.6	382.2	4.50	0.93	4.88 YES
L0001013	0	0.14740E-05	461012.0	3772827.7	382.2	4.50	0.93	4.88 YES
L0001014	0	0.14740E-05	461014.0	3772827.7	382.2	4.50	0.93	4.88 YES
L0001015	0	0.14740E-05	461016.0	3772827.8	382.2	4.50	0.93	4.88 YES
L0001016	0	0.14740E-05	461018.0	3772827.8	382.2	4.50	0.93	4.88 YES
L0001017	0	0.14740E-05	461020.0	3772827.9	382.2	4.50	0.93	4.88 YES
L0001018	0	0.14740E-05	461022.0	3772827.9	382.2	4.50	0.93	4.88 YES
L0001019	0	0.14740E-05	461024.0	3772828.0	382.3	4.50	0.93	4.88 YES
L0001020	0	0.14740E-05	461026.0	3772828.1	382.3	4.50	0.93	4.88 YES
L0001021	0	0.14740E-05	461028.0	3772828.1	382.3	4.50	0.93	4.88 YES
L0001022	0	0.14740E-05	461030.0	3772828.2	382.3	4.50	0.93	4.88 YES
L0001023	0	0.14740E-05	461032.0	3772828.2	382.3	4.50	0.93	4.88 YES
L0001024	0	0.14740E-05	461034.0	3772828.3	382.3	4.50	0.93	

4.88 YES
L0001025 0 0.14740E-05 461036.0 3772828.3 382.3 4.50 0.93
4.88 YES
L0001026 0 0.14740E-05 461038.0 3772828.4 382.3 4.50 0.93
4.88 YES
L0001027 0 0.14740E-05 461040.0 3772828.5 382.3 4.50 0.93
4.88 YES
L0001028 0 0.14740E-05 461042.0 3772828.5 382.3 4.50 0.93
4.88 YES
L0001029 0 0.14740E-05 461044.0 3772828.6 382.4 4.50 0.93
4.88 YES
L0001030 0 0.14740E-05 461046.0 3772828.6 382.4 4.50 0.93
4.88 YES
L0001031 0 0.14740E-05 461048.0 3772828.7 382.4 4.50 0.93
4.88 YES
L0001032 0 0.14740E-05 461050.0 3772828.7 382.4 4.50 0.93
4.88 YES
L0001033 0 0.14740E-05 461052.0 3772828.8 382.4 4.50 0.93
4.88 YES
L0001034 0 0.14740E-05 461054.0 3772828.8 382.4 4.50 0.93
4.88 YES
L0001035 0 0.14740E-05 461056.0 3772828.9 382.4 4.50 0.93
4.88 YES
L0001036 0 0.14740E-05 461058.0 3772829.0 382.4 4.50 0.93
4.88 YES
L0001037 0 0.14740E-05 461060.0 3772829.0 382.4 4.50 0.93
4.88 YES
L0001038 0 0.14740E-05 461062.0 3772829.1 382.4 4.50 0.93
4.88 YES
L0001039 0 0.14740E-05 461064.0 3772829.1 382.4 4.50 0.93
4.88 YES
L0001040 0 0.14740E-05 461066.0 3772829.2 382.4 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER PART.	EMISSION RATE (GRAMS/SEC)	X	Y	BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0001041	0	0.14740E-05	461068.0	3772829.2	382.4	4.50	0.93	4.88 YES
L0001042	0	0.14740E-05	461070.0	3772829.3	382.4	4.50	0.93	4.88 YES
L0001043	0	0.14740E-05	461072.0	3772829.4	382.4	4.50	0.93	4.88 YES
L0001044	0	0.14740E-05	461074.0	3772829.4	382.4	4.50	0.93	4.88 YES
L0001045	0	0.14740E-05	461076.0	3772829.5	382.4	4.50	0.93	4.88 YES
L0001046	0	0.14740E-05	461078.0	3772829.5	382.4	4.50	0.93	4.88 YES
L0001047	0	0.14740E-05	461080.0	3772829.6	382.4	4.50	0.93	4.88 YES
L0001048	0	0.14740E-05	461082.0	3772829.6	382.4	4.50	0.93	4.88 YES
L0001049	0	0.14740E-05	461084.0	3772829.7	382.4	4.50	0.93	4.88 YES
L0001050	0	0.14740E-05	461086.0	3772829.8	382.4	4.50	0.93	4.88 YES
L0001051	0	0.14740E-05	461088.0	3772829.8	382.4	4.50	0.93	4.88 YES
L0001052	0	0.14740E-05	461090.0	3772829.9	382.4	4.50	0.93	4.88 YES
L0001053	0	0.14740E-05	461092.0	3772829.9	382.4	4.50	0.93	4.88 YES
L0001054	0	0.14740E-05	461094.0	3772830.0	382.4	4.50	0.93	4.88 YES
L0001055	0	0.14740E-05	461096.0	3772830.0	382.4	4.50	0.93	4.88 YES
L0001056	0	0.14740E-05	461098.0	3772830.1	382.4	4.50	0.93	4.88 YES
L0001057	0	0.14740E-05	461100.0	3772830.1	382.4	4.50	0.93	4.88 YES
L0001058	0	0.14740E-05	461102.0	3772830.2	382.4	4.50	0.93	4.88 YES
L0001059	0	0.14740E-05	461104.0	3772830.3	382.4	4.50	0.93	4.88 YES
L0001060	0	0.14740E-05	461106.0	3772830.3	382.4	4.50	0.93	4.88 YES
L0001061	0	0.14740E-05	461108.0	3772830.4	382.4	4.50	0.93	4.88 YES
L0001062	0	0.14740E-05	461110.0	3772830.4	382.4	4.50	0.93	

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4.88     YES
 L0001063         0   0.14740E-05  461112.0 3772830.5   382.4     4.50     0.93
4.88     YES
 L0001064         0   0.14740E-05  461114.0 3772830.5   382.4     4.50     0.93
4.88     YES
 L0001065         0   0.14740E-05  461116.0 3772830.6   382.4     4.50     0.93
4.88     YES
 L0001066         0   0.14740E-05  461118.0 3772830.7   382.4     4.50     0.93
4.88     YES
 L0001067         0   0.14740E-05  461120.0 3772830.7   382.4     4.50     0.93
4.88     YES
 L0001068         0   0.14740E-05  461122.0 3772830.8   382.4     4.50     0.93
4.88     YES
 L0001069         0   0.14740E-05  461124.0 3772830.8   382.4     4.50     0.93
4.88     YES
 L0001070         0   0.14740E-05  461126.0 3772830.9   382.4     4.50     0.93
4.88     YES
 L0001071         0   0.14740E-05  461128.0 3772830.9   382.4     4.50     0.93
4.88     YES
 L0001072         0   0.14740E-05  461130.0 3772831.0   382.4     4.50     0.93
4.88     YES
 L0001073         0   0.14740E-05  461132.0 3772831.1   382.4     4.50     0.93
4.88     YES
 L0001074         0   0.14740E-05  461134.0 3772831.1   382.4     4.50     0.93
4.88     YES
 L0001075         0   0.14740E-05  461136.0 3772831.2   382.4     4.50     0.93
4.88     YES
 L0001076         0   0.14740E-05  461138.0 3772831.2   382.4     4.50     0.93
4.88     YES
 L0001077         0   0.14740E-05  461140.0 3772831.3   382.4     4.50     0.93
4.88     YES
 L0001078         0   0.14740E-05  461142.0 3772831.3   382.5     4.50     0.93
4.88     YES
 L0001079         0   0.14740E-05  461144.0 3772831.4   382.5     4.50     0.93
4.88     YES
 L0001080         0   0.14740E-05  461146.0 3772831.5   382.5     4.50     0.93
4.88     YES
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	URBAN SOURCE IN SZ	EMISSION RATE SCALAR VARY BY
L0001081	0	0.14740E-05	461148.0	3772831.5	382.5	4.50	0.93	YES	
L0001082	0	0.14740E-05	461150.0	3772831.6	382.5	4.50	0.93	YES	
L0001083	0	0.14740E-05	461152.0	3772831.6	382.5	4.50	0.93	YES	
L0001084	0	0.14740E-05	461154.0	3772831.7	382.5	4.50	0.93	YES	
L0001085	0	0.14740E-05	461156.0	3772831.7	382.5	4.50	0.93	YES	
L0001086	0	0.14740E-05	461158.0	3772831.8	382.5	4.50	0.93	YES	
L0001087	0	0.14740E-05	461160.0	3772831.8	382.5	4.50	0.93	YES	
L0001088	0	0.14740E-05	461162.0	3772831.9	382.5	4.50	0.93	YES	
L0001089	0	0.14740E-05	461164.0	3772832.0	382.5	4.50	0.93	YES	
L0001090	0	0.14740E-05	461166.0	3772832.0	382.5	4.50	0.93	YES	
L0001091	0	0.14740E-05	461168.0	3772832.1	382.5	4.50	0.93	YES	
L0001092	0	0.14740E-05	461170.0	3772832.1	382.5	4.50	0.93	YES	
L0001093	0	0.14740E-05	461172.0	3772832.2	382.5	4.50	0.93	YES	
L0001094	0	0.14740E-05	461174.0	3772832.2	382.5	4.50	0.93	YES	
L0001095	0	0.14740E-05	461176.0	3772832.3	382.5	4.50	0.93	YES	
L0001096	0	0.14740E-05	461178.0	3772832.4	382.5	4.50	0.93	YES	
L0001097	0	0.14740E-05	461180.0	3772832.4	382.5	4.50	0.93	YES	
L0001098	0	0.14740E-05	461182.0	3772832.5	382.5	4.50	0.93	YES	
L0001099	0	0.14740E-05	461184.0	3772832.5	382.5	4.50	0.93	YES	
L0001100	0	0.14740E-05	461186.0	3772832.6	382.6	4.50	0.93		

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4.88     YES
 L0001101         0   0.14740E-05  461188.0 3772832.6   382.6     4.50     0.93
4.88     YES
 L0001102         0   0.14740E-05  461190.0 3772832.7   382.6     4.50     0.93
4.88     YES
 L0001103         0   0.14740E-05  461192.0 3772832.8   382.6     4.50     0.93
4.88     YES
 L0001104         0   0.14740E-05  461194.0 3772832.8   382.6     4.50     0.93
4.88     YES
 L0001105         0   0.14740E-05  461196.0 3772832.9   382.5     4.50     0.93
4.88     YES
 L0001106         0   0.14740E-05  461198.0 3772832.9   382.5     4.50     0.93
4.88     YES
 L0001107         0   0.14740E-05  461200.0 3772833.0   382.5     4.50     0.93
4.88     YES
 L0001108         0   0.14740E-05  461202.0 3772833.0   382.5     4.50     0.93
4.88     YES
 L0001109         0   0.14740E-05  461204.0 3772833.1   382.5     4.50     0.93
4.88     YES
 L0001110         0   0.14740E-05  461206.0 3772833.1   382.4     4.50     0.93
4.88     YES
 L0001111         0   0.14740E-05  461208.0 3772833.2   382.4     4.50     0.93
4.88     YES
 L0001112         0   0.14740E-05  461210.0 3772833.3   382.4     4.50     0.93
4.88     YES
 L0001113         0   0.14740E-05  461212.0 3772833.3   382.4     4.50     0.93
4.88     YES
 L0001114         0   0.14740E-05  461214.0 3772833.4   382.4     4.50     0.93
4.88     YES
 L0001115         0   0.14740E-05  461216.0 3772833.4   382.4     4.50     0.93
4.88     YES
 L0001116         0   0.14740E-05  461218.0 3772833.5   382.3     4.50     0.93
4.88     YES
 L0001117         0   0.14740E-05  461220.0 3772833.5   382.3     4.50     0.93
4.88     YES
 L0001118         0   0.14740E-05  461222.0 3772833.6   382.3     4.50     0.93
4.88     YES
 L0001119         0   0.14740E-05  461224.0 3772833.7   382.3     4.50     0.93
4.88     YES
 L0001120         0   0.14740E-05  461226.0 3772833.7   382.3     4.50     0.93
4.88     YES
↟ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0001121	0	0.14740E-05	461228.0	3772833.8	382.3	4.50	0.93	4.88	YES	
L0001122	0	0.14740E-05	461230.0	3772833.8	382.3	4.50	0.93	4.88	YES	
L0001123	0	0.14740E-05	461232.0	3772833.9	382.2	4.50	0.93	4.88	YES	
L0001124	0	0.14740E-05	461234.0	3772833.9	382.2	4.50	0.93	4.88	YES	
L0001125	0	0.14740E-05	461236.0	3772834.0	382.2	4.50	0.93	4.88	YES	
L0001126	0	0.14740E-05	461238.0	3772834.1	382.2	4.50	0.93	4.88	YES	
L0001127	0	0.14740E-05	461240.0	3772834.1	382.2	4.50	0.93	4.88	YES	
L0001128	0	0.14740E-05	461242.0	3772834.2	382.2	4.50	0.93	4.88	YES	
L0001129	0	0.14740E-05	461244.0	3772834.2	382.2	4.50	0.93	4.88	YES	
L0001130	0	0.14740E-05	461246.0	3772834.3	382.2	4.50	0.93	4.88	YES	
L0001131	0	0.14740E-05	461248.0	3772834.3	382.2	4.50	0.93	4.88	YES	
L0001132	0	0.14740E-05	461250.0	3772834.4	382.1	4.50	0.93	4.88	YES	
L0001133	0	0.14740E-05	461252.0	3772834.4	382.1	4.50	0.93	4.88	YES	
L0001134	0	0.14740E-05	461254.0	3772834.5	382.1	4.50	0.93	4.88	YES	
L0001135	0	0.14740E-05	461256.0	3772834.6	382.1	4.50	0.93	4.88	YES	
L0001136	0	0.14740E-05	461258.0	3772834.6	382.1	4.50	0.93	4.88	YES	
L0001137	0	0.14740E-05	461259.9	3772834.7	382.1	4.50	0.93	4.88	YES	
L0001138	0	0.14740E-05	461261.9	3772834.7	382.1	4.50	0.93			

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4.88     YES
 L0001139         0   0.14740E-05  461263.9 3772834.8   382.1     4.50     0.93
4.88     YES
 L0001140         0   0.14740E-05  461265.9 3772834.8   382.1     4.50     0.93
4.88     YES
 L0001141         0   0.14740E-05  461267.9 3772834.9   382.1     4.50     0.93
4.88     YES
 L0001142         0   0.14740E-05  461269.9 3772835.0   382.1     4.50     0.93
4.88     YES
 L0001143         0   0.14740E-05  461271.9 3772835.0   382.1     4.50     0.93
4.88     YES
 L0001144         0   0.14740E-05  461273.9 3772835.1   382.1     4.50     0.93
4.88     YES
 L0001145         0   0.14740E-05  461275.9 3772835.1   382.1     4.50     0.93
4.88     YES
 L0001146         0   0.14740E-05  461277.9 3772835.2   382.1     4.50     0.93
4.88     YES
 L0001147         0   0.14740E-05  461279.9 3772835.2   382.1     4.50     0.93
4.88     YES
 L0001148         0   0.14740E-05  461281.9 3772835.3   382.1     4.50     0.93
4.88     YES
 L0001149         0   0.14740E-05  461283.9 3772835.4   382.1     4.50     0.93
4.88     YES
 L0001150         0   0.14740E-05  461285.9 3772835.4   382.1     4.50     0.93
4.88     YES
 L0001151         0   0.14740E-05  461287.9 3772835.5   382.1     4.50     0.93
4.88     YES
 L0001152         0   0.14740E-05  461289.9 3772835.5   382.1     4.50     0.93
4.88     YES
 L0001153         0   0.14740E-05  461291.9 3772835.6   382.1     4.50     0.93
4.88     YES
 L0001154         0   0.14740E-05  461293.9 3772835.6   382.1     4.50     0.93
4.88     YES
 L0001155         0   0.14740E-05  461295.9 3772835.7   382.1     4.50     0.93
4.88     YES
 L0001156         0   0.14740E-05  461297.9 3772835.8   382.1     4.50     0.93
4.88     YES
 L0001157         0   0.14740E-05  461299.9 3772835.8   382.1     4.50     0.93
4.88     YES
 L0001158         0   0.14740E-05  461301.9 3772835.9   382.1     4.50     0.93
4.88     YES
 L0001159         0   0.14740E-05  461303.9 3772835.9   382.0     4.50     0.93
4.88     YES
 L0001160         0   0.14740E-05  461305.9 3772836.0   382.0     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001161	0	0.14740E-05	461307.9	3772836.0	382.0	4.50	0.93	4.88	YES	
L0001162	0	0.14740E-05	461309.9	3772836.1	382.0	4.50	0.93	4.88	YES	
L0001163	0	0.14740E-05	461311.9	3772836.1	382.0	4.50	0.93	4.88	YES	
L0001164	0	0.14740E-05	461313.9	3772836.2	382.0	4.50	0.93	4.88	YES	
L0001165	0	0.14740E-05	461315.9	3772836.3	382.0	4.50	0.93	4.88	YES	
L0001166	0	0.14740E-05	461317.9	3772836.3	382.0	4.50	0.93	4.88	YES	
L0001167	0	0.14740E-05	461319.9	3772836.4	382.0	4.50	0.93	4.88	YES	
L0001168	0	0.14740E-05	461321.9	3772836.4	382.0	4.50	0.93	4.88	YES	
L0001169	0	0.14740E-05	461323.9	3772836.5	382.0	4.50	0.93	4.88	YES	
L0001170	0	0.14740E-05	461325.9	3772836.5	382.0	4.50	0.93	4.88	YES	
L0001171	0	0.14740E-05	461327.9	3772836.6	382.0	4.50	0.93	4.88	YES	
L0001172	0	0.14740E-05	461329.9	3772836.7	382.0	4.50	0.93	4.88	YES	
L0001173	0	0.14740E-05	461331.9	3772836.7	382.0	4.50	0.93	4.88	YES	
L0001174	0	0.14740E-05	461333.9	3772836.8	382.0	4.50	0.93	4.88	YES	
L0001175	0	0.14740E-05	461335.9	3772836.8	381.9	4.50	0.93	4.88	YES	
L0001176	0	0.14740E-05	461337.9	3772836.9	381.9	4.50	0.93			

4.88	YES						
L0001177	0	0.14740E-05	461339.9	3772836.9	381.9	4.50	0.93
4.88	YES						
L0001178	0	0.14740E-05	461341.9	3772837.0	381.9	4.50	0.93
4.88	YES						
L0001179	0	0.14740E-05	461343.9	3772837.1	381.9	4.50	0.93
4.88	YES						
L0001180	0	0.14740E-05	461345.9	3772837.1	381.9	4.50	0.93
4.88	YES						
L0001181	0	0.14740E-05	461347.9	3772837.2	381.9	4.50	0.93
4.88	YES						
L0001182	0	0.14740E-05	461349.9	3772837.2	381.9	4.50	0.93
4.88	YES						
L0001183	0	0.14740E-05	461351.9	3772837.3	381.9	4.50	0.93
4.88	YES						
L0001184	0	0.14740E-05	461353.9	3772837.3	381.9	4.50	0.93
4.88	YES						
L0001185	0	0.14740E-05	461355.9	3772837.4	381.9	4.50	0.93
4.88	YES						
L0001186	0	0.14740E-05	461357.9	3772837.4	381.9	4.50	0.93
4.88	YES						
L0001187	0	0.14740E-05	461359.9	3772837.5	381.9	4.50	0.93
4.88	YES						
L0001188	0	0.14740E-05	461361.9	3772837.6	381.9	4.50	0.93
4.88	YES						
L0001189	0	0.14740E-05	461363.9	3772837.6	381.9	4.50	0.93
4.88	YES						
L0001190	0	0.14740E-05	461365.9	3772837.7	381.9	4.50	0.93
4.88	YES						
L0001191	0	0.14740E-05	461367.9	3772837.7	381.9	4.50	0.93
4.88	YES						
L0001192	0	0.14740E-05	461369.9	3772837.8	381.9	4.50	0.93
4.88	YES						
L0001193	0	0.14740E-05	461371.9	3772837.8	381.9	4.50	0.93
4.88	YES						
L0001194	0	0.14740E-05	461373.9	3772837.9	381.9	4.50	0.93
4.88	YES						
L0001195	0	0.14740E-05	461375.9	3772838.0	381.9	4.50	0.93
4.88	YES						
L0001196	0	0.14740E-05	461377.9	3772838.0	381.9	4.50	0.93
4.88	YES						
L0001197	0	0.14740E-05	461379.9	3772838.1	381.9	4.50	0.93
4.88	YES						
L0001198	0	0.14740E-05	461381.9	3772838.1	381.9	4.50	0.93
4.88	YES						
L0001199	0	0.14740E-05	461383.9	3772838.2	381.9	4.50	0.93
4.88	YES						
L0001200	0	0.14740E-05	461385.9	3772838.2	381.9	4.50	0.93

4.88 YES
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001201	0	0.14740E-05	461387.9	3772838.3	381.9	4.50	0.93	4.88	YES	
L0001202	0	0.14740E-05	461389.9	3772838.4	381.9	4.50	0.93	4.88	YES	
L0001203	0	0.14740E-05	461391.9	3772838.4	381.9	4.50	0.93	4.88	YES	
L0001204	0	0.14740E-05	461393.9	3772838.5	381.9	4.50	0.93	4.88	YES	
L0001205	0	0.14740E-05	461395.9	3772838.5	381.9	4.50	0.93	4.88	YES	
L0001206	0	0.14740E-05	461397.9	3772838.6	381.9	4.50	0.93	4.88	YES	
L0001207	0	0.14740E-05	461399.9	3772838.6	381.9	4.50	0.93	4.88	YES	
L0001208	0	0.14740E-05	461401.9	3772838.7	381.9	4.50	0.93	4.88	YES	
L0001209	0	0.14740E-05	461403.9	3772838.7	381.9	4.50	0.93	4.88	YES	
L0001210	0	0.14740E-05	461405.9	3772838.8	381.9	4.50	0.93	4.88	YES	
L0001211	0	0.14740E-05	461407.9	3772838.9	381.9	4.50	0.93	4.88	YES	
L0001212	0	0.14740E-05	461409.9	3772838.9	381.8	4.50	0.93	4.88	YES	
L0001213	0	0.14740E-05	461411.9	3772839.0	381.8	4.50	0.93	4.88	YES	
L0001214	0	0.14740E-05	461413.9	3772839.0	381.8	4.50	0.93			

4.88 YES							
L0001215	0	0.14740E-05	461415.9	3772839.1	381.8	4.50	0.93
4.88 YES							
L0001216	0	0.14740E-05	461417.9	3772839.1	381.8	4.50	0.93
4.88 YES							
L0001217	0	0.14740E-05	461419.9	3772839.2	381.8	4.50	0.93
4.88 YES							
L0001218	0	0.14740E-05	461421.9	3772839.3	381.7	4.50	0.93
4.88 YES							
L0001219	0	0.14740E-05	461423.9	3772839.3	381.7	4.50	0.93
4.88 YES							
L0001220	0	0.14740E-05	461425.9	3772839.4	381.7	4.50	0.93
4.88 YES							
L0001221	0	0.14740E-05	461427.9	3772839.4	381.7	4.50	0.93
4.88 YES							
L0001222	0	0.14740E-05	461429.9	3772839.5	381.6	4.50	0.93
4.88 YES							
L0001223	0	0.14740E-05	461431.9	3772839.5	381.6	4.50	0.93
4.88 YES							
L0001224	0	0.14740E-05	461433.9	3772839.6	381.6	4.50	0.93
4.88 YES							
L0001225	0	0.14740E-05	461435.9	3772839.7	381.5	4.50	0.93
4.88 YES							
L0001226	0	0.14740E-05	461437.9	3772839.7	381.5	4.50	0.93
4.88 YES							
L0001227	0	0.14740E-05	461439.9	3772839.8	381.5	4.50	0.93
4.88 YES							
L0001228	0	0.14740E-05	461441.9	3772839.8	381.4	4.50	0.93
4.88 YES							
L0001229	0	0.14740E-05	461443.9	3772839.9	381.4	4.50	0.93
4.88 YES							
L0001230	0	0.14740E-05	461445.9	3772839.9	381.4	4.50	0.93
4.88 YES							
L0001231	0	0.14740E-05	461447.9	3772840.0	381.4	4.50	0.93
4.88 YES							
L0001232	0	0.14740E-05	461449.9	3772840.0	381.3	4.50	0.93
4.88 YES							
L0001233	0	0.14740E-05	461451.9	3772840.1	381.3	4.50	0.93
4.88 YES							
L0001234	0	0.14740E-05	461453.9	3772840.2	381.3	4.50	0.93
4.88 YES							
L0001235	0	0.14740E-05	461455.9	3772840.2	381.3	4.50	0.93
4.88 YES							
L0001236	0	0.14740E-05	461457.9	3772840.3	381.3	4.50	0.93
4.88 YES							
L0001237	0	0.14740E-05	461459.9	3772840.3	381.3	4.50	0.93
4.88 YES							
L0001238	0	0.14740E-05	461461.9	3772840.4	381.3	4.50	0.93

```
4.88     YES
 L0001239         0   0.14740E-05  461463.9 3772840.4   381.3     4.50     0.93
4.88     YES
 L0001240         0   0.14740E-05  461465.9 3772840.5   381.3     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001241         0   0.14740E-05  461467.9 3772840.6   381.3     4.50     0.93
4.88     YES
 L0001242         0   0.14740E-05  461469.9 3772840.6   381.3     4.50     0.93
4.88     YES
 L0001243         0   0.14740E-05  461471.9 3772840.7   381.3     4.50     0.93
4.88     YES
 L0001244         0   0.14740E-05  461473.9 3772840.7   381.3     4.50     0.93
4.88     YES
 L0001245         0   0.14740E-05  461475.9 3772840.8   381.3     4.50     0.93
4.88     YES
 L0001246         0   0.14740E-05  461477.9 3772840.8   381.3     4.50     0.93
4.88     YES
 L0001247         0   0.14740E-05  461479.9 3772840.9   381.3     4.50     0.93
4.88     YES
 L0001248         0   0.14740E-05  461481.9 3772841.0   381.3     4.50     0.93
4.88     YES
 L0001249         0   0.14740E-05  461483.9 3772841.0   381.3     4.50     0.93
4.88     YES
 L0001250         0   0.14740E-05  461485.9 3772841.1   381.3     4.50     0.93
4.88     YES
 L0001251         0   0.14740E-05  461487.9 3772841.1   381.4     4.50     0.93
4.88     YES
 L0001252         0   0.14740E-05  461489.9 3772841.2   381.4     4.50     0.93
```

4.88 YES							
L0001253	0	0.14740E-05	461491.9	3772841.2	381.4	4.50	0.93
4.88 YES							
L0001254	0	0.14740E-05	461493.9	3772841.3	381.4	4.50	0.93
4.88 YES							
L0001255	0	0.14740E-05	461495.9	3772841.3	381.4	4.50	0.93
4.88 YES							
L0001256	0	0.14740E-05	461497.9	3772841.4	381.4	4.50	0.93
4.88 YES							
L0001257	0	0.14740E-05	461499.9	3772841.5	381.4	4.50	0.93
4.88 YES							
L0001258	0	0.14740E-05	461501.9	3772841.5	381.4	4.50	0.93
4.88 YES							
L0001259	0	0.14740E-05	461503.9	3772841.6	381.4	4.50	0.93
4.88 YES							
L0001260	0	0.14740E-05	461505.9	3772841.6	381.4	4.50	0.93
4.88 YES							
L0001261	0	0.14740E-05	461507.8	3772841.7	381.4	4.50	0.93
4.88 YES							
L0001262	0	0.14740E-05	461509.8	3772841.7	381.4	4.50	0.93
4.88 YES							
L0001263	0	0.14740E-05	461511.8	3772841.8	381.4	4.50	0.93
4.88 YES							
L0001264	0	0.14740E-05	461513.8	3772841.9	381.4	4.50	0.93
4.88 YES							
L0001265	0	0.14740E-05	461515.8	3772841.9	381.3	4.50	0.93
4.88 YES							
L0001266	0	0.14740E-05	461517.8	3772842.0	381.3	4.50	0.93
4.88 YES							
L0001267	0	0.14740E-05	461519.8	3772842.0	381.3	4.50	0.93
4.88 YES							
L0001268	0	0.14740E-05	461521.8	3772842.1	381.3	4.50	0.93
4.88 YES							
L0001269	0	0.14740E-05	461523.8	3772842.1	381.3	4.50	0.93
4.88 YES							
L0001270	0	0.14740E-05	461525.8	3772842.2	381.3	4.50	0.93
4.88 YES							
L0001271	0	0.14740E-05	461527.8	3772842.3	381.3	4.50	0.93
4.88 YES							
L0001272	0	0.14740E-05	461529.8	3772842.3	381.3	4.50	0.93
4.88 YES							
L0001273	0	0.14740E-05	461531.8	3772842.4	381.3	4.50	0.93
4.88 YES							
L0001274	0	0.14740E-05	461533.8	3772842.4	381.3	4.50	0.93
4.88 YES							
L0001275	0	0.14740E-05	461535.8	3772842.5	381.3	4.50	0.93
4.88 YES							
L0001276	0	0.14740E-05	461537.8	3772842.5	381.3	4.50	0.93

```
4.88     YES
 L0001277         0   0.14740E-05  461539.8 3772842.6   381.3     4.50     0.93
4.88     YES
 L0001278         0   0.14740E-05  461541.8 3772842.6   381.3     4.50     0.93
4.88     YES
 L0001279         0   0.14740E-05  461543.8 3772842.7   381.3     4.50     0.93
4.88     YES
 L0001280         0   0.14740E-05  461545.8 3772842.8   381.3     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001281         0   0.14740E-05  461547.8 3772842.8   381.3     4.50     0.93
4.88     YES
 L0001282         0   0.14740E-05  461549.8 3772842.9   381.3     4.50     0.93
4.88     YES
 L0001283         0   0.14740E-05  461551.8 3772842.9   381.3     4.50     0.93
4.88     YES
 L0001284         0   0.14740E-05  461553.8 3772843.0   381.2     4.50     0.93
4.88     YES
 L0001285         0   0.14740E-05  461555.8 3772843.0   381.2     4.50     0.93
4.88     YES
 L0001286         0   0.14740E-05  461557.8 3772843.1   381.2     4.50     0.93
4.88     YES
 L0001287         0   0.14740E-05  461559.8 3772843.2   381.2     4.50     0.93
4.88     YES
 L0001288         0   0.14740E-05  461561.8 3772843.2   381.2     4.50     0.93
4.88     YES
 L0001289         0   0.14740E-05  461563.8 3772843.3   381.2     4.50     0.93
4.88     YES
 L0001290         0   0.14740E-05  461565.8 3772843.3   381.2     4.50     0.93
```

4.88	YES							
L0001291		0	0.14740E-05	461567.8	3772843.4	381.2	4.50	0.93
4.88	YES							
L0001292		0	0.14740E-05	461569.8	3772843.4	381.2	4.50	0.93
4.88	YES							
L0001293		0	0.14740E-05	461571.8	3772843.5	381.2	4.50	0.93
4.88	YES							
L0001294		0	0.14740E-05	461573.8	3772843.6	381.2	4.50	0.93
4.88	YES							
L0001295		0	0.14740E-05	461575.8	3772843.6	381.2	4.50	0.93
4.88	YES							
L0001296		0	0.14740E-05	461577.8	3772843.7	381.2	4.50	0.93
4.88	YES							
L0001297		0	0.14740E-05	461579.8	3772843.7	381.2	4.50	0.93
4.88	YES							
L0001298		0	0.14740E-05	461581.8	3772843.8	381.2	4.50	0.93
4.88	YES							
L0001299		0	0.14740E-05	461583.8	3772843.8	381.2	4.50	0.93
4.88	YES							
L0001300		0	0.14740E-05	461585.8	3772843.9	381.2	4.50	0.93
4.88	YES							
L0001301		0	0.14740E-05	461587.8	3772844.0	381.2	4.50	0.93
4.88	YES							
L0001302		0	0.14740E-05	461589.8	3772844.0	381.2	4.50	0.93
4.88	YES							
L0001303		0	0.14740E-05	461591.8	3772844.1	381.2	4.50	0.93
4.88	YES							
L0001304		0	0.14740E-05	461593.8	3772844.1	381.2	4.50	0.93
4.88	YES							
L0001305		0	0.14740E-05	461595.8	3772844.2	381.2	4.50	0.93
4.88	YES							
L0001306		0	0.14740E-05	461597.8	3772844.2	381.2	4.50	0.93
4.88	YES							
L0001307		0	0.14740E-05	461599.8	3772844.3	381.2	4.50	0.93
4.88	YES							
L0001308		0	0.14740E-05	461601.8	3772844.3	381.2	4.50	0.93
4.88	YES							
L0001309		0	0.14740E-05	461603.8	3772844.4	381.2	4.50	0.93
4.88	YES							
L0001310		0	0.14740E-05	461605.8	3772844.5	381.2	4.50	0.93
4.88	YES							
L0001311		0	0.14740E-05	461607.8	3772844.5	381.2	4.50	0.93
4.88	YES							
L0001312		0	0.14740E-05	461609.8	3772844.6	381.2	4.50	0.93
4.88	YES							
L0001313		0	0.14740E-05	461611.8	3772844.6	381.2	4.50	0.93
4.88	YES							
L0001314		0	0.14740E-05	461613.8	3772844.7	381.2	4.50	0.93

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4.88     YES
 L0001315         0   0.14740E-05  461615.8 3772844.7   381.2     4.50     0.93
4.88     YES
 L0001316         0   0.14740E-05  461617.8 3772844.8   381.2     4.50     0.93
4.88     YES
 L0001317         0   0.14740E-05  461619.8 3772844.9   381.2     4.50     0.93
4.88     YES
 L0001318         0   0.14740E-05  461621.8 3772844.9   381.2     4.50     0.93
4.88     YES
 L0001319         0   0.14740E-05  461623.8 3772845.0   381.2     4.50     0.93
4.88     YES
 L0001320         0   0.14740E-05  461625.8 3772845.0   381.2     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

 L0001321         0   0.14740E-05  461627.8 3772845.1   381.2     4.50     0.93
4.88     YES
 L0001322         0   0.14740E-05  461629.8 3772845.1   381.2     4.50     0.93
4.88     YES
 L0001323         0   0.14740E-05  461631.8 3772845.2   381.2     4.50     0.93
4.88     YES
 L0001324         0   0.14740E-05  461633.8 3772845.3   381.1     4.50     0.93
4.88     YES
 L0001325         0   0.14740E-05  461635.8 3772845.3   381.1     4.50     0.93
4.88     YES
 L0001326         0   0.14740E-05  461637.8 3772845.4   381.1     4.50     0.93
4.88     YES
 L0001327         0   0.14740E-05  461639.8 3772845.4   381.1     4.50     0.93
4.88     YES
 L0001328         0   0.14740E-05  461641.8 3772845.5   381.1     4.50     0.93
```

4.88	YES							
L0001329		0	0.14740E-05	461643.8	3772845.5	381.1	4.50	0.93
4.88	YES							
L0001330		0	0.14740E-05	461645.8	3772845.6	381.1	4.50	0.93
4.88	YES							
L0001331		0	0.14740E-05	461647.8	3772845.6	381.1	4.50	0.93
4.88	YES							
L0001332		0	0.14740E-05	461649.8	3772845.7	381.1	4.50	0.93
4.88	YES							
L0001333		0	0.14740E-05	461651.8	3772845.8	381.1	4.50	0.93
4.88	YES							
L0001334		0	0.14740E-05	461653.8	3772845.8	381.1	4.50	0.93
4.88	YES							
L0001335		0	0.14740E-05	461655.8	3772845.9	381.1	4.50	0.93
4.88	YES							
L0001336		0	0.14740E-05	461657.8	3772845.9	381.1	4.50	0.93
4.88	YES							
L0001337		0	0.14740E-05	461659.8	3772846.0	381.1	4.50	0.93
4.88	YES							
L0001338		0	0.14740E-05	461661.8	3772846.0	381.1	4.50	0.93
4.88	YES							
L0001339		0	0.14740E-05	461663.8	3772846.1	381.1	4.50	0.93
4.88	YES							
L0001340		0	0.14740E-05	461665.8	3772846.2	381.1	4.50	0.93
4.88	YES							
L0001341		0	0.14740E-05	461667.8	3772846.2	381.1	4.50	0.93
4.88	YES							
L0001342		0	0.14740E-05	461669.8	3772846.3	381.1	4.50	0.93
4.88	YES							
L0001343		0	0.14740E-05	461671.8	3772846.3	381.1	4.50	0.93
4.88	YES							
L0001344		0	0.14740E-05	461673.8	3772846.4	381.1	4.50	0.93
4.88	YES							
L0001345		0	0.14740E-05	461675.8	3772846.4	381.1	4.50	0.93
4.88	YES							
L0001346		0	0.14740E-05	461677.8	3772846.5	381.1	4.50	0.93
4.88	YES							
L0001347		0	0.14740E-05	461679.8	3772846.6	381.1	4.50	0.93
4.88	YES							
L0001348		0	0.14740E-05	461681.8	3772846.6	381.1	4.50	0.93
4.88	YES							
L0001349		0	0.14740E-05	461683.8	3772846.7	381.1	4.50	0.93
4.88	YES							
L0001350		0	0.14740E-05	461685.8	3772846.7	381.1	4.50	0.93
4.88	YES							
L0001351		0	0.14740E-05	461687.8	3772846.8	381.1	4.50	0.93
4.88	YES							
L0001352		0	0.14740E-05	461689.8	3772846.8	381.1	4.50	0.93

4.88 YES
L0001353 0 0.14740E-05 461691.8 3772846.9 381.1 4.50 0.93
4.88 YES
L0001354 0 0.14740E-05 461693.8 3772846.9 381.1 4.50 0.93
4.88 YES
L0001355 0 0.14740E-05 461695.8 3772847.0 381.1 4.50 0.93
4.88 YES
L0001356 0 0.14740E-05 461697.8 3772847.1 381.1 4.50 0.93
4.88 YES
L0001357 0 0.14740E-05 461699.8 3772847.1 381.1 4.50 0.93
4.88 YES
L0001358 0 0.14740E-05 461701.8 3772847.2 381.1 4.50 0.93
4.88 YES
L0001359 0 0.14740E-05 461703.8 3772847.2 381.1 4.50 0.93
4.88 YES
L0001360 0 0.14740E-05 461705.8 3772847.3 381.1 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001361	0	0.14740E-05	461707.8	3772847.3	381.1	4.50	0.93	4.88	YES	
L0001362	0	0.14740E-05	461709.8	3772847.4	381.1	4.50	0.93	4.88	YES	
L0001363	0	0.14740E-05	461711.8	3772847.5	381.1	4.50	0.93	4.88	YES	
L0001364	0	0.14740E-05	461713.8	3772847.5	381.1	4.50	0.93	4.88	YES	
L0001365	0	0.14740E-05	461715.8	3772847.6	381.1	4.50	0.93	4.88	YES	
L0001366	0	0.14740E-05	461717.8	3772847.6	381.1	4.50	0.93			

4.88	YES							
L0001367		0	0.14740E-05	461719.8	3772847.7	381.1	4.50	0.93
4.88	YES							
L0001368		0	0.14740E-05	461721.8	3772847.7	381.1	4.50	0.93
4.88	YES							
L0001369		0	0.14740E-05	461723.8	3772847.8	381.1	4.50	0.93
4.88	YES							
L0001370		0	0.14740E-05	461725.8	3772847.9	381.1	4.50	0.93
4.88	YES							
L0001371		0	0.14740E-05	461727.8	3772847.9	381.1	4.50	0.93
4.88	YES							
L0001372		0	0.14740E-05	461729.8	3772848.0	381.1	4.50	0.93
4.88	YES							
L0001373		0	0.14740E-05	461731.8	3772848.0	381.1	4.50	0.93
4.88	YES							
L0001374		0	0.14740E-05	461733.8	3772848.1	381.1	4.50	0.93
4.88	YES							
L0001375		0	0.14740E-05	461735.8	3772848.1	381.1	4.50	0.93
4.88	YES							
L0001376		0	0.14740E-05	461737.8	3772848.2	381.1	4.50	0.93
4.88	YES							
L0001377		0	0.14740E-05	461739.8	3772848.2	381.1	4.50	0.93
4.88	YES							
L0001378		0	0.14740E-05	461741.8	3772848.3	381.1	4.50	0.93
4.88	YES							
L0001379		0	0.14740E-05	461743.8	3772848.4	381.1	4.50	0.93
4.88	YES							
L0001380		0	0.14740E-05	461745.8	3772848.4	381.1	4.50	0.93
4.88	YES							
L0001381		0	0.14740E-05	461747.8	3772848.5	381.1	4.50	0.93
4.88	YES							
L0001382		0	0.14740E-05	461749.8	3772848.5	381.1	4.50	0.93
4.88	YES							
L0001383		0	0.14740E-05	461751.8	3772848.6	381.1	4.50	0.93
4.88	YES							
L0001384		0	0.14740E-05	461753.8	3772848.6	381.1	4.50	0.93
4.88	YES							
L0001385		0	0.14740E-05	461755.8	3772848.7	381.1	4.50	0.93
4.88	YES							
L0001386		0	0.14740E-05	461757.8	3772848.8	381.1	4.50	0.93
4.88	YES							
L0001387		0	0.14740E-05	461759.7	3772848.8	381.1	4.50	0.93
4.88	YES							
L0001388		0	0.14740E-05	461761.7	3772848.9	381.1	4.50	0.93
4.88	YES							
L0001389		0	0.14740E-05	461763.7	3772848.9	381.1	4.50	0.93
4.88	YES							
L0001390		0	0.14740E-05	461765.7	3772849.0	381.1	4.50	0.93

```
4.88     YES
 L0001391         0   0.14740E-05  461767.7 3772849.0   381.1     4.50     0.93
4.88     YES
 L0001392         0   0.14740E-05  461769.7 3772849.1   381.1     4.50     0.93
4.88     YES
 L0001393         0   0.14740E-05  461771.7 3772849.2   381.1     4.50     0.93
4.88     YES
 L0001394         0   0.14740E-05  461773.7 3772849.2   381.1     4.50     0.93
4.88     YES
 L0001395         0   0.14740E-05  461775.7 3772849.3   381.1     4.50     0.93
4.88     YES
 L0001396         0   0.14740E-05  461777.7 3772849.3   381.1     4.50     0.93
4.88     YES
 L0001397         0   0.14740E-05  461779.7 3772849.4   381.1     4.50     0.93
4.88     YES
 L0001398         0   0.14740E-05  461781.7 3772849.4   381.1     4.50     0.93
4.88     YES
 L0001399         0   0.14740E-05  461783.7 3772849.5   381.1     4.50     0.93
4.88     YES
 L0001400         0   0.14740E-05  461785.7 3772849.6   381.1     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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 L0001401         0   0.14740E-05  461787.7 3772849.6   381.1     4.50     0.93
4.88     YES
 L0001402         0   0.14740E-05  461789.7 3772849.7   381.1     4.50     0.93
4.88     YES
 L0001403         0   0.14740E-05  461791.7 3772849.7   381.1     4.50     0.93
4.88     YES
 L0001404         0   0.14740E-05  461793.7 3772849.8   381.1     4.50     0.93
```

4.88 YES							
L0001405	0	0.14740E-05	461795.7	3772849.8	381.1	4.50	0.93
4.88 YES							
L0001406	0	0.14740E-05	461797.7	3772849.9	381.1	4.50	0.93
4.88 YES							
L0001407	0	0.14740E-05	461799.7	3772849.9	381.1	4.50	0.93
4.88 YES							
L0001408	0	0.14740E-05	461801.7	3772850.0	381.1	4.50	0.93
4.88 YES							
L0001409	0	0.14740E-05	461803.7	3772850.1	381.1	4.50	0.93
4.88 YES							
L0001410	0	0.14740E-05	461805.7	3772850.1	381.1	4.50	0.93
4.88 YES							
L0001411	0	0.14740E-05	461807.7	3772850.2	381.1	4.50	0.93
4.88 YES							
L0001412	0	0.14740E-05	461809.7	3772850.2	381.1	4.50	0.93
4.88 YES							
L0001413	0	0.14740E-05	461811.7	3772850.3	381.1	4.50	0.93
4.88 YES							
L0001414	0	0.14740E-05	461813.7	3772850.3	381.1	4.50	0.93
4.88 YES							
L0001415	0	0.14740E-05	461815.7	3772850.4	381.1	4.50	0.93
4.88 YES							
L0001416	0	0.14740E-05	461817.7	3772850.5	381.1	4.50	0.93
4.88 YES							
L0001417	0	0.14740E-05	461819.7	3772850.5	381.1	4.50	0.93
4.88 YES							
L0001418	0	0.14740E-05	461821.7	3772850.6	381.1	4.50	0.93
4.88 YES							
L0001419	0	0.14740E-05	461823.7	3772850.6	381.1	4.50	0.93
4.88 YES							
L0001420	0	0.14740E-05	461825.7	3772850.7	381.1	4.50	0.93
4.88 YES							
L0001421	0	0.14740E-05	461827.7	3772850.7	381.1	4.50	0.93
4.88 YES							
L0001422	0	0.14740E-05	461829.7	3772850.8	381.1	4.50	0.93
4.88 YES							
L0001423	0	0.14740E-05	461831.7	3772850.9	381.1	4.50	0.93
4.88 YES							
L0001424	0	0.14740E-05	461833.7	3772850.9	381.1	4.50	0.93
4.88 YES							
L0001425	0	0.14740E-05	461835.7	3772851.0	381.1	4.50	0.93
4.88 YES							
L0001426	0	0.14740E-05	461837.7	3772851.0	381.1	4.50	0.93
4.88 YES							
L0001427	0	0.14740E-05	461839.7	3772851.1	381.1	4.50	0.93
4.88 YES							
L0001428	0	0.14740E-05	461841.7	3772851.1	381.1	4.50	0.93

```
4.88     YES
 L0001429         0   0.14740E-05  461843.7 3772851.2   381.1     4.50     0.93
4.88     YES
 L0001430         0   0.14740E-05  461845.7 3772851.2   381.1     4.50     0.93
4.88     YES
 L0001431         0   0.14740E-05  461847.7 3772851.3   381.1     4.50     0.93
4.88     YES
 L0001432         0   0.14740E-05  461849.7 3772851.4   381.1     4.50     0.93
4.88     YES
 L0001433         0   0.14740E-05  461851.7 3772851.4   381.1     4.50     0.93
4.88     YES
 L0001434         0   0.14740E-05  461853.7 3772851.5   381.1     4.50     0.93
4.88     YES
 L0001435         0   0.14740E-05  461855.7 3772851.5   381.1     4.50     0.93
4.88     YES
 L0001436         0   0.14740E-05  461857.7 3772851.6   381.1     4.50     0.93
4.88     YES
 L0001437         0   0.14740E-05  461859.7 3772851.6   381.1     4.50     0.93
4.88     YES
 L0001438         0   0.14740E-05  461861.7 3772851.7   381.1     4.50     0.93
4.88     YES
 L0001439         0   0.14740E-05  461863.7 3772851.8   381.1     4.50     0.93
4.88     YES
 L0001440         0   0.14740E-05  461865.7 3772851.8   381.1     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                      ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

 L0001441         0   0.14740E-05  461867.7 3772851.9   381.1     4.50     0.93
4.88     YES
 L0001442         0   0.14740E-05  461869.7 3772851.9   381.1     4.50     0.93
```

4.88 YES							
L0001443	0	0.14740E-05	461871.7	3772852.0	381.1	4.50	0.93
4.88 YES							
L0001444	0	0.14740E-05	461873.7	3772852.0	381.2	4.50	0.93
4.88 YES							
L0001445	0	0.14740E-05	461875.7	3772852.1	381.2	4.50	0.93
4.88 YES							
L0001446	0	0.14740E-05	461877.7	3772852.2	381.2	4.50	0.93
4.88 YES							
L0001447	0	0.14740E-05	461879.7	3772852.2	381.2	4.50	0.93
4.88 YES							
L0001448	0	0.14740E-05	461881.7	3772852.3	381.2	4.50	0.93
4.88 YES							
L0001449	0	0.14740E-05	461883.7	3772852.3	381.2	4.50	0.93
4.88 YES							
L0001450	0	0.14740E-05	461885.7	3772852.4	381.2	4.50	0.93
4.88 YES							
L0001451	0	0.14740E-05	461887.7	3772852.4	381.2	4.50	0.93
4.88 YES							
L0001452	0	0.14740E-05	461889.7	3772852.5	381.2	4.50	0.93
4.88 YES							
L0001453	0	0.14740E-05	461891.7	3772852.5	381.2	4.50	0.93
4.88 YES							
L0001454	0	0.14740E-05	461893.7	3772852.6	381.2	4.50	0.93
4.88 YES							
L0001455	0	0.14740E-05	461895.7	3772852.7	381.2	4.50	0.93
4.88 YES							
L0001456	0	0.14740E-05	461897.7	3772852.7	381.2	4.50	0.93
4.88 YES							
L0001457	0	0.14740E-05	461899.7	3772852.8	381.2	4.50	0.93
4.88 YES							
L0001458	0	0.14740E-05	461901.7	3772852.8	381.2	4.50	0.93
4.88 YES							
L0001459	0	0.14740E-05	461903.7	3772852.9	381.2	4.50	0.93
4.88 YES							
L0001460	0	0.14740E-05	461905.7	3772852.9	381.2	4.50	0.93
4.88 YES							
L0001461	0	0.14740E-05	461907.7	3772853.0	381.2	4.50	0.93
4.88 YES							
L0001462	0	0.14740E-05	461909.7	3772853.1	381.2	4.50	0.93
4.88 YES							
L0001463	0	0.14740E-05	461911.7	3772853.1	381.2	4.50	0.93
4.88 YES							
L0001464	0	0.14740E-05	461913.7	3772853.2	381.2	4.50	0.93
4.88 YES							
L0001465	0	0.14740E-05	461915.7	3772853.2	381.2	4.50	0.93
4.88 YES							
L0001466	0	0.14740E-05	461917.7	3772853.3	381.2	4.50	0.93

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4.88     YES
 L0001467         0   0.14740E-05  461919.7 3772853.3   381.2     4.50     0.93
4.88     YES
 L0001468         0   0.14740E-05  461921.7 3772853.4   381.2     4.50     0.93
4.88     YES
 L0001469         0   0.14740E-05  461923.7 3772853.5   381.2     4.50     0.93
4.88     YES
 L0001470         0   0.14740E-05  461925.7 3772853.5   381.2     4.50     0.93
4.88     YES
 L0001471         0   0.14740E-05  461927.7 3772853.6   381.2     4.50     0.93
4.88     YES
 L0001472         0   0.14740E-05  461929.7 3772853.6   381.2     4.50     0.93
4.88     YES
 L0001473         0   0.14740E-05  461931.7 3772853.7   381.2     4.50     0.93
4.88     YES
 L0001474         0   0.14740E-05  461933.7 3772853.7   381.2     4.50     0.93
4.88     YES
 L0001475         0   0.14740E-05  461935.7 3772853.8   381.2     4.50     0.93
4.88     YES
 L0001476         0   0.14740E-05  461937.7 3772853.8   381.2     4.50     0.93
4.88     YES
 L0001477         0   0.14740E-05  461939.7 3772853.9   381.2     4.50     0.93
4.88     YES
 L0001478         0   0.14740E-05  461941.7 3772854.0   381.2     4.50     0.93
4.88     YES
 L0001479         0   0.14740E-05  461943.7 3772854.0   381.2     4.50     0.93
4.88     YES
 L0001480         0   0.14740E-05  461945.7 3772854.1   381.2     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
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L0001481	0	0.14740E-05	461947.7	3772854.1	381.2	4.50	0.93	4.88 YES
L0001482	0	0.14740E-05	461949.7	3772854.2	381.2	4.50	0.93	4.88 YES
L0001483	0	0.14740E-05	461951.7	3772854.2	381.2	4.50	0.93	4.88 YES
L0001484	0	0.14740E-05	461953.7	3772854.3	381.2	4.50	0.93	4.88 YES
L0001485	0	0.14740E-05	461955.7	3772854.4	381.2	4.50	0.93	4.88 YES
L0001486	0	0.14740E-05	461957.7	3772854.4	381.2	4.50	0.93	4.88 YES
L0001487	0	0.14740E-05	461959.7	3772854.5	381.2	4.50	0.93	4.88 YES
L0001488	0	0.14740E-05	461961.7	3772854.5	381.2	4.50	0.93	4.88 YES
L0001489	0	0.14740E-05	461963.7	3772854.6	381.2	4.50	0.93	4.88 YES
L0001490	0	0.14740E-05	461965.7	3772854.6	381.2	4.50	0.93	4.88 YES
L0001491	0	0.14740E-05	461967.7	3772854.7	381.2	4.50	0.93	4.88 YES
L0001492	0	0.14740E-05	461969.7	3772854.8	381.2	4.50	0.93	4.88 YES
L0001493	0	0.14740E-05	461971.7	3772854.8	381.2	4.50	0.93	4.88 YES
L0001494	0	0.14740E-05	461973.7	3772854.9	381.2	4.50	0.93	4.88 YES
L0001495	0	0.14740E-05	461975.7	3772854.9	381.2	4.50	0.93	4.88 YES
L0001496	0	0.14740E-05	461977.7	3772855.0	381.2	4.50	0.93	4.88 YES
L0001497	0	0.14740E-05	461979.7	3772855.0	381.2	4.50	0.93	4.88 YES
L0001498	0	0.14740E-05	461981.7	3772855.1	381.2	4.50	0.93	4.88 YES
L0001499	0	0.14740E-05	461983.7	3772855.1	381.1	4.50	0.93	4.88 YES
L0001500	0	0.14740E-05	461985.7	3772855.2	381.1	4.50	0.93	4.88 YES
L0001501	0	0.14740E-05	461987.7	3772855.3	381.1	4.50	0.93	4.88 YES
L0001502	0	0.14740E-05	461989.7	3772855.3	381.1	4.50	0.93	4.88 YES
L0001503	0	0.14740E-05	461991.7	3772855.4	381.1	4.50	0.93	4.88 YES
L0001504	0	0.14740E-05	461993.7	3772855.4	381.1	4.50	0.93	

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4.88     YES
 L0001505         0   0.14740E-05  461995.7 3772855.5   381.0     4.50     0.93
4.88     YES
 L0001506         0   0.14740E-05  461997.7 3772855.5   381.0     4.50     0.93
4.88     YES
 L0001507         0   0.14740E-05  461999.7 3772855.6   381.0     4.50     0.93
4.88     YES
 L0001508         0   0.14740E-05  462001.7 3772855.7   381.0     4.50     0.93
4.88     YES
 L0001509         0   0.14740E-05  462003.7 3772855.7   380.9     4.50     0.93
4.88     YES
 L0001510         0   0.14740E-05  462005.7 3772855.8   380.9     4.50     0.93
4.88     YES
 L0001511         0   0.14740E-05  462007.6 3772855.8   380.9     4.50     0.93
4.88     YES
 L0001512         0   0.14740E-05  462009.6 3772855.9   380.9     4.50     0.93
4.88     YES
 L0001513         0   0.14740E-05  462011.6 3772855.9   380.9     4.50     0.93
4.88     YES
 L0001514         0   0.14740E-05  462013.6 3772856.0   380.8     4.50     0.93
4.88     YES
 L0001515         0   0.14740E-05  462015.6 3772856.1   380.8     4.50     0.93
4.88     YES
 L0001516         0   0.14740E-05  462017.6 3772856.1   380.8     4.50     0.93
4.88     YES
 L0001517         0   0.14740E-05  462019.6 3772856.2   380.8     4.50     0.93
4.88     YES
 L0001518         0   0.14740E-05  462021.6 3772856.2   380.8     4.50     0.93
4.88     YES
 L0001519         0   0.14740E-05  462023.6 3772856.3   380.7     4.50     0.93
4.88     YES
 L0001520         0   0.14740E-05  462025.6 3772856.3   380.7     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
```

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0001521	0	0.14740E-05	462027.6	3772856.4	380.7	4.50	0.93	4.88 YES
L0001522	0	0.14740E-05	462029.6	3772856.5	380.7	4.50	0.93	4.88 YES
L0001523	0	0.14740E-05	462031.6	3772856.5	380.7	4.50	0.93	4.88 YES
L0001524	0	0.14740E-05	462033.6	3772856.6	380.6	4.50	0.93	4.88 YES
L0001525	0	0.14740E-05	462035.6	3772856.6	380.6	4.50	0.93	4.88 YES
L0001526	0	0.14740E-05	462037.6	3772856.7	380.6	4.50	0.93	4.88 YES
L0001527	0	0.14740E-05	462039.6	3772856.7	380.6	4.50	0.93	4.88 YES
L0001528	0	0.14740E-05	462041.6	3772856.8	380.6	4.50	0.93	4.88 YES
L0001529	0	0.14740E-05	462043.6	3772856.8	380.6	4.50	0.93	4.88 YES
L0001530	0	0.14740E-05	462045.6	3772856.9	380.6	4.50	0.93	4.88 YES
L0001531	0	0.14740E-05	462047.6	3772857.0	380.5	4.50	0.93	4.88 YES
L0001532	0	0.14740E-05	462049.6	3772857.0	380.5	4.50	0.93	4.88 YES
L0001533	0	0.14740E-05	462051.6	3772857.1	380.5	4.50	0.93	4.88 YES
L0001534	0	0.14740E-05	462053.6	3772857.1	380.5	4.50	0.93	4.88 YES
L0001535	0	0.14740E-05	462055.6	3772857.2	380.5	4.50	0.93	4.88 YES
L0001536	0	0.14740E-05	462057.6	3772857.2	380.5	4.50	0.93	4.88 YES
L0001537	0	0.14740E-05	462059.6	3772857.3	380.5	4.50	0.93	4.88 YES
L0001538	0	0.14740E-05	462061.6	3772857.4	380.5	4.50	0.93	4.88 YES
L0001539	0	0.14740E-05	462063.6	3772857.4	380.5	4.50	0.93	4.88 YES
L0001540	0	0.14740E-05	462065.6	3772857.5	380.5	4.50	0.93	4.88 YES
L0001541	0	0.14740E-05	462067.6	3772857.5	380.5	4.50	0.93	4.88 YES
L0001542	0	0.14740E-05	462069.6	3772857.6	380.4	4.50	0.93	

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4.88     YES
 L0001543         0   0.14740E-05  462071.6 3772857.6   380.4     4.50     0.93
4.88     YES
 L0001544         0   0.14740E-05  462073.6 3772857.7   380.4     4.50     0.93
4.88     YES
 L0001545         0   0.14740E-05  462075.6 3772857.8   380.4     4.50     0.93
4.88     YES
 L0001546         0   0.14740E-05  462077.6 3772857.8   380.4     4.50     0.93
4.88     YES
 L0001547         0   0.14740E-05  462079.6 3772857.9   380.4     4.50     0.93
4.88     YES
 L0001548         0   0.14740E-05  462081.6 3772857.9   380.4     4.50     0.93
4.88     YES
 L0001549         0   0.14740E-05  462083.6 3772858.0   380.4     4.50     0.93
4.88     YES
 L0001550         0   0.14740E-05  462085.6 3772858.0   380.4     4.50     0.93
4.88     YES
 L0001551         0   0.14740E-05  462087.6 3772858.1   380.4     4.50     0.93
4.88     YES
 L0001552         0   0.14740E-05  462089.6 3772858.1   380.4     4.50     0.93
4.88     YES
 L0001553         0   0.14740E-05  462091.6 3772858.2   380.4     4.50     0.93
4.88     YES
 L0001554         0   0.14740E-05  462093.6 3772858.3   380.4     4.50     0.93
4.88     YES
 L0001555         0   0.14740E-05  462095.6 3772858.3   380.4     4.50     0.93
4.88     YES
 L0001556         0   0.14740E-05  462097.6 3772858.4   380.4     4.50     0.93
4.88     YES
 L0001557         0   0.14740E-05  462099.6 3772858.4   380.4     4.50     0.93
4.88     YES
 L0001558         0   0.14740E-05  462101.6 3772858.5   380.4     4.50     0.93
4.88     YES
 L0001559         0   0.14740E-05  462103.6 3772858.5   380.4     4.50     0.93
4.88     YES
 L0001560         0   0.14740E-05  462105.6 3772858.6   380.4     4.50     0.93
4.88     YES
↟ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001561	0	0.14740E-05	462107.6	3772858.7	380.4	4.50	0.93	4.88	YES	
L0001562	0	0.14740E-05	462109.6	3772858.7	380.4	4.50	0.93	4.88	YES	
L0001563	0	0.14740E-05	462111.6	3772858.8	380.4	4.50	0.93	4.88	YES	
L0001564	0	0.14740E-05	462113.6	3772858.8	380.4	4.50	0.93	4.88	YES	
L0001565	0	0.14740E-05	462115.6	3772858.9	380.4	4.50	0.93	4.88	YES	
L0001566	0	0.14740E-05	462117.6	3772858.9	380.4	4.50	0.93	4.88	YES	
L0001567	0	0.14740E-05	462119.6	3772859.0	380.4	4.50	0.93	4.88	YES	
L0001568	0	0.14740E-05	462121.6	3772859.1	380.4	4.50	0.93	4.88	YES	
L0001569	0	0.14740E-05	462123.6	3772859.1	380.4	4.50	0.93	4.88	YES	
L0001570	0	0.14740E-05	462125.6	3772859.2	380.4	4.50	0.93	4.88	YES	
L0001571	0	0.14740E-05	462127.6	3772859.2	380.4	4.50	0.93	4.88	YES	
L0001572	0	0.14740E-05	462129.6	3772859.3	380.4	4.50	0.93	4.88	YES	
L0001573	0	0.14740E-05	462131.6	3772859.3	380.4	4.50	0.93	4.88	YES	
L0001574	0	0.14740E-05	462133.6	3772859.4	380.4	4.50	0.93	4.88	YES	
L0001575	0	0.14740E-05	462135.6	3772859.4	380.4	4.50	0.93	4.88	YES	
L0001576	0	0.14740E-05	462137.6	3772859.5	380.4	4.50	0.93	4.88	YES	
L0001577	0	0.14740E-05	462139.6	3772859.6	380.4	4.50	0.93	4.88	YES	
L0001578	0	0.14740E-05	462141.6	3772859.6	380.4	4.50	0.93	4.88	YES	
L0001579	0	0.14740E-05	462143.6	3772859.7	380.5	4.50	0.93	4.88	YES	
L0001580	0	0.14740E-05	462145.6	3772859.7	380.5	4.50	0.93			

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4.88     YES
 L0001581         0   0.14740E-05  462147.6 3772859.8   380.5     4.50     0.93
4.88     YES
 L0001582         0   0.14740E-05  462149.6 3772859.8   380.5     4.50     0.93
4.88     YES
 L0001583         0   0.14740E-05  462151.6 3772859.9   380.5     4.50     0.93
4.88     YES
 L0001584         0   0.14740E-05  462153.6 3772860.0   380.5     4.50     0.93
4.88     YES
 L0001585         0   0.14740E-05  462155.6 3772860.0   380.5     4.50     0.93
4.88     YES
 L0001586         0   0.14740E-05  462157.6 3772860.1   380.5     4.50     0.93
4.88     YES
 L0001587         0   0.14740E-05  462159.6 3772860.1   380.6     4.50     0.93
4.88     YES
 L0001588         0   0.14740E-05  462161.6 3772860.2   380.6     4.50     0.93
4.88     YES
 L0001589         0   0.14740E-05  462163.6 3772860.2   380.6     4.50     0.93
4.88     YES
 L0001590         0   0.14740E-05  462165.6 3772860.3   380.6     4.50     0.93
4.88     YES
 L0001591         0   0.14740E-05  462167.6 3772860.4   380.6     4.50     0.93
4.88     YES
 L0001592         0   0.14740E-05  462169.6 3772860.4   380.6     4.50     0.93
4.88     YES
 L0001593         0   0.14740E-05  462171.6 3772860.5   380.6     4.50     0.93
4.88     YES
 L0001594         0   0.14740E-05  462173.6 3772860.5   380.6     4.50     0.93
4.88     YES
 L0001595         0   0.14740E-05  462175.6 3772860.6   380.7     4.50     0.93
4.88     YES
 L0001596         0   0.14740E-05  462177.6 3772860.6   380.7     4.50     0.93
4.88     YES
 L0001597         0   0.14740E-05  462179.6 3772860.7   380.7     4.50     0.93
4.88     YES
 L0001598         0   0.14740E-05  462181.6 3772860.8   380.7     4.50     0.93
4.88     YES
 L0001599         0   0.14740E-05  462183.6 3772860.8   380.7     4.50     0.93
4.88     YES
 L0001600         0   0.14740E-05  462185.6 3772860.9   380.7     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001601	0	0.14740E-05	462187.6	3772860.9	380.7	4.50	0.93	4.88	YES	
L0001602	0	0.14740E-05	462189.6	3772861.0	380.8	4.50	0.93	4.88	YES	
L0001603	0	0.14740E-05	462191.6	3772861.0	380.8	4.50	0.93	4.88	YES	
L0001604	0	0.14740E-05	462193.6	3772861.1	380.8	4.50	0.93	4.88	YES	
L0001605	0	0.14740E-05	462195.6	3772861.1	380.8	4.50	0.93	4.88	YES	
L0001606	0	0.14740E-05	462197.6	3772861.2	380.8	4.50	0.93	4.88	YES	
L0001607	0	0.14740E-05	462199.6	3772861.3	380.8	4.50	0.93	4.88	YES	
L0001608	0	0.14740E-05	462201.6	3772861.3	380.8	4.50	0.93	4.88	YES	
L0001609	0	0.14740E-05	462203.6	3772861.4	380.8	4.50	0.93	4.88	YES	
L0001610	0	0.14740E-05	462205.6	3772861.4	380.8	4.50	0.93	4.88	YES	
L0001611	0	0.14740E-05	462207.6	3772861.5	380.8	4.50	0.93	4.88	YES	
L0001612	0	0.14740E-05	462209.6	3772861.5	380.8	4.50	0.93	4.88	YES	
L0001613	0	0.14740E-05	462211.6	3772861.6	380.8	4.50	0.93	4.88	YES	
L0001614	0	0.14740E-05	462213.6	3772861.7	380.8	4.50	0.93	4.88	YES	
L0001615	0	0.14740E-05	462215.6	3772861.7	380.8	4.50	0.93	4.88	YES	
L0001616	0	0.14740E-05	462217.6	3772861.8	380.8	4.50	0.93	4.88	YES	
L0001617	0	0.14740E-05	462219.6	3772861.8	380.8	4.50	0.93	4.88	YES	
L0001618	0	0.14740E-05	462221.6	3772861.9	380.7	4.50	0.93			

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4.88     YES
 L0001619         0   0.14740E-05  462223.6 3772861.9   380.7     4.50     0.93
4.88     YES
 L0001620         0   0.14740E-05  462225.6 3772862.0   380.7     4.50     0.93
4.88     YES
 L0001621         0   0.14740E-05  462227.6 3772862.0   380.7     4.50     0.93
4.88     YES
 L0001622         0   0.14740E-05  462229.6 3772862.1   380.7     4.50     0.93
4.88     YES
 L0001623         0   0.14740E-05  462231.6 3772862.2   380.7     4.50     0.93
4.88     YES
 L0001624         0   0.14740E-05  462233.6 3772862.2   380.7     4.50     0.93
4.88     YES
 L0001625         0   0.14740E-05  462235.6 3772862.3   380.7     4.50     0.93
4.88     YES
 L0001626         0   0.14740E-05  462237.6 3772862.3   380.6     4.50     0.93
4.88     YES
 L0001627         0   0.14740E-05  462239.6 3772862.4   380.6     4.50     0.93
4.88     YES
 L0001628         0   0.14740E-05  462241.6 3772862.4   380.6     4.50     0.93
4.88     YES
 L0001629         0   0.14740E-05  462243.6 3772862.5   380.6     4.50     0.93
4.88     YES
 L0001630         0   0.14740E-05  462245.6 3772862.6   380.6     4.50     0.93
4.88     YES
 L0001631         0   0.14740E-05  462247.6 3772862.6   380.6     4.50     0.93
4.88     YES
 L0001632         0   0.14740E-05  462249.6 3772862.7   380.6     4.50     0.93
4.88     YES
 L0001633         0   0.14740E-05  462251.6 3772862.7   380.6     4.50     0.93
4.88     YES
 L0001634         0   0.14740E-05  462253.6 3772862.8   380.6     4.50     0.93
4.88     YES
 L0001635         0   0.14740E-05  462255.6 3772862.8   380.6     4.50     0.93
4.88     YES
 L0001636         0   0.14740E-05  462257.5 3772862.9   380.6     4.50     0.93
4.88     YES
 L0001637         0   0.14740E-05  462259.5 3772863.0   380.6     4.50     0.93
4.88     YES
 L0001638         0   0.14740E-05  462261.5 3772863.0   380.6     4.50     0.93
4.88     YES
 L0001639         0   0.14740E-05  462263.5 3772863.1   380.6     4.50     0.93
4.88     YES
 L0001640         0   0.14740E-05  462265.5 3772863.1   380.6     4.50     0.93
4.88     YES
```

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001641	0	0.14740E-05	462267.5	3772863.2	380.6	4.50	0.93	4.88	YES	
L0001642	0	0.14740E-05	462269.5	3772863.2	380.6	4.50	0.93	4.88	YES	
L0001643	0	0.14740E-05	462271.5	3772863.3	380.6	4.50	0.93	4.88	YES	
L0001644	0	0.14740E-05	462273.5	3772863.4	380.6	4.50	0.93	4.88	YES	
L0001645	0	0.14740E-05	462275.5	3772863.4	380.5	4.50	0.93	4.88	YES	
L0001646	0	0.14740E-05	462277.5	3772863.5	380.5	4.50	0.93	4.88	YES	
L0001647	0	0.14740E-05	462279.5	3772863.5	380.5	4.50	0.93	4.88	YES	
L0001648	0	0.14740E-05	462281.5	3772863.6	380.5	4.50	0.93	4.88	YES	
L0001649	0	0.14740E-05	462283.5	3772863.6	380.5	4.50	0.93	4.88	YES	
L0001650	0	0.14740E-05	462285.5	3772863.7	380.5	4.50	0.93	4.88	YES	
L0001651	0	0.14740E-05	462287.5	3772863.7	380.5	4.50	0.93	4.88	YES	
L0001652	0	0.14740E-05	462289.5	3772863.8	380.5	4.50	0.93	4.88	YES	
L0001653	0	0.14740E-05	462291.5	3772863.9	380.5	4.50	0.93	4.88	YES	
L0001654	0	0.14740E-05	462293.5	3772863.9	380.5	4.50	0.93	4.88	YES	
L0001655	0	0.14740E-05	462295.5	3772864.0	380.5	4.50	0.93	4.88	YES	
L0001656	0	0.14740E-05	462297.5	3772864.0	380.5	4.50	0.93			

4.88	YES						
L0001657	0	0.14740E-05	462299.5	3772864.1	380.5	4.50	0.93
4.88	YES						
L0001658	0	0.14740E-05	462301.5	3772864.1	380.5	4.50	0.93
4.88	YES						
L0001659	0	0.14740E-05	462303.5	3772864.2	380.5	4.50	0.93
4.88	YES						
L0001660	0	0.14740E-05	462305.5	3772864.3	380.5	4.50	0.93
4.88	YES						
L0001661	0	0.14740E-05	462307.5	3772864.3	380.5	4.50	0.93
4.88	YES						
L0001662	0	0.14740E-05	462309.5	3772864.4	380.5	4.50	0.93
4.88	YES						
L0001663	0	0.14740E-05	462311.5	3772864.4	380.5	4.50	0.93
4.88	YES						
L0001664	0	0.14740E-05	462313.5	3772864.5	380.5	4.50	0.93
4.88	YES						
L0001665	0	0.14740E-05	462315.5	3772864.5	380.5	4.50	0.93
4.88	YES						
L0001666	0	0.14740E-05	462317.5	3772864.6	380.4	4.50	0.93
4.88	YES						
L0001667	0	0.14740E-05	462319.5	3772864.7	380.4	4.50	0.93
4.88	YES						
L0001668	0	0.14740E-05	462321.5	3772864.7	380.4	4.50	0.93
4.88	YES						
L0001669	0	0.14740E-05	462323.5	3772864.8	380.4	4.50	0.93
4.88	YES						
L0001670	0	0.14740E-05	462325.5	3772864.8	380.4	4.50	0.93
4.88	YES						
L0001671	0	0.14740E-05	462327.5	3772864.9	380.4	4.50	0.93
4.88	YES						
L0001672	0	0.14740E-05	462329.5	3772864.9	380.4	4.50	0.93
4.88	YES						
L0001673	0	0.14740E-05	462331.5	3772865.0	380.4	4.50	0.93
4.88	YES						
L0001674	0	0.14740E-05	462333.5	3772865.0	380.4	4.50	0.93
4.88	YES						
L0001675	0	0.14740E-05	462335.5	3772865.1	380.4	4.50	0.93
4.88	YES						
L0001676	0	0.14740E-05	462337.5	3772865.2	380.4	4.50	0.93
4.88	YES						
L0001677	0	0.14740E-05	462339.5	3772865.2	380.4	4.50	0.93
4.88	YES						
L0001678	0	0.14740E-05	462341.5	3772865.3	380.4	4.50	0.93
4.88	YES						
L0001679	0	0.14740E-05	462343.5	3772865.3	380.4	4.50	0.93
4.88	YES						
L0001680	0	0.14740E-05	462345.5	3772865.4	380.4	4.50	0.93

4.88 YES
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001681	0	0.14740E-05	462347.5	3772865.4	380.4	4.50	0.93	4.88	YES	
L0001682	0	0.14740E-05	462349.5	3772865.5	380.4	4.50	0.93	4.88	YES	
L0001683	0	0.14740E-05	462351.5	3772865.6	380.4	4.50	0.93	4.88	YES	
L0001684	0	0.14740E-05	462353.5	3772865.6	380.4	4.50	0.93	4.88	YES	
L0001685	0	0.14740E-05	462355.5	3772865.7	380.4	4.50	0.93	4.88	YES	
L0001686	0	0.14740E-05	462357.5	3772865.7	380.4	4.50	0.93	4.88	YES	
L0001687	0	0.14740E-05	462359.5	3772865.8	380.4	4.50	0.93	4.88	YES	
L0001688	0	0.14740E-05	462361.5	3772865.8	380.4	4.50	0.93	4.88	YES	
L0001689	0	0.14740E-05	462363.5	3772865.9	380.4	4.50	0.93	4.88	YES	
L0001690	0	0.14740E-05	462365.5	3772866.0	380.4	4.50	0.93	4.88	YES	
L0001691	0	0.14740E-05	462367.5	3772866.0	380.4	4.50	0.93	4.88	YES	
L0001692	0	0.14740E-05	462369.5	3772866.1	380.4	4.50	0.93	4.88	YES	
L0001693	0	0.14740E-05	462371.5	3772866.1	380.4	4.50	0.93	4.88	YES	
L0001694	0	0.14740E-05	462373.5	3772866.2	380.4	4.50	0.93			

4.88	YES							
L0001695		0	0.14740E-05	462375.5	3772866.2	380.4	4.50	0.93
4.88	YES							
L0001696		0	0.14740E-05	462377.5	3772866.3	380.4	4.50	0.93
4.88	YES							
L0001697		0	0.14740E-05	462379.5	3772866.3	380.4	4.50	0.93
4.88	YES							
L0001698		0	0.14740E-05	462381.5	3772866.4	380.3	4.50	0.93
4.88	YES							
L0001699		0	0.14740E-05	462383.5	3772866.5	380.3	4.50	0.93
4.88	YES							
L0001700		0	0.14740E-05	462385.5	3772866.5	380.3	4.50	0.93
4.88	YES							
L0001701		0	0.14740E-05	462387.5	3772866.6	380.3	4.50	0.93
4.88	YES							
L0001702		0	0.14740E-05	462389.5	3772866.6	380.3	4.50	0.93
4.88	YES							
L0001703		0	0.14740E-05	462391.5	3772866.7	380.3	4.50	0.93
4.88	YES							
L0001704		0	0.14740E-05	462393.5	3772866.7	380.3	4.50	0.93
4.88	YES							
L0001705		0	0.14740E-05	462395.5	3772866.8	380.3	4.50	0.93
4.88	YES							
L0001706		0	0.14740E-05	462397.5	3772866.9	380.3	4.50	0.93
4.88	YES							
L0001707		0	0.14740E-05	462399.5	3772866.9	380.3	4.50	0.93
4.88	YES							
L0001708		0	0.14740E-05	462401.5	3772867.0	380.3	4.50	0.93
4.88	YES							
L0001709		0	0.14740E-05	462403.5	3772867.0	380.3	4.50	0.93
4.88	YES							
L0001710		0	0.14740E-05	462405.5	3772867.1	380.3	4.50	0.93
4.88	YES							
L0001711		0	0.14740E-05	462407.5	3772867.1	380.3	4.50	0.93
4.88	YES							
L0001712		0	0.14740E-05	462409.5	3772867.2	380.3	4.50	0.93
4.88	YES							
L0001713		0	0.14740E-05	462411.5	3772867.3	380.3	4.50	0.93
4.88	YES							
L0001714		0	0.14740E-05	462413.5	3772867.3	380.2	4.50	0.93
4.88	YES							
L0001715		0	0.14740E-05	462415.5	3772867.4	380.2	4.50	0.93
4.88	YES							
L0001716		0	0.14740E-05	462417.5	3772867.4	380.2	4.50	0.93
4.88	YES							
L0001717		0	0.14740E-05	462419.5	3772867.5	380.2	4.50	0.93
4.88	YES							
L0001718		0	0.14740E-05	462421.5	3772867.5	380.2	4.50	0.93

```
4.88     YES
 L0001719         0   0.14740E-05  462423.5 3772867.6   380.2     4.50     0.93
4.88     YES
 L0001720         0   0.14740E-05  462425.5 3772867.6   380.2     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                     BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0001721         0   0.14740E-05  462427.5 3772867.7   380.2     4.50     0.93
4.88     YES
 L0001722         0   0.14740E-05  462429.5 3772867.8   380.2     4.50     0.93
4.88     YES
 L0001723         0   0.14740E-05  462431.5 3772867.8   380.2     4.50     0.93
4.88     YES
 L0001724         0   0.14740E-05  462433.5 3772867.9   380.2     4.50     0.93
4.88     YES
 L0001725         0   0.14740E-05  462435.5 3772867.9   380.2     4.50     0.93
4.88     YES
 L0001726         0   0.14740E-05  462437.5 3772868.0   380.2     4.50     0.93
4.88     YES
 L0001727         0   0.14740E-05  462439.5 3772868.0   380.2     4.50     0.93
4.88     YES
 L0001728         0   0.14740E-05  462441.5 3772868.1   380.2     4.50     0.93
4.88     YES
 L0001729         0   0.14740E-05  462443.5 3772868.2   380.2     4.50     0.93
4.88     YES
 L0001730         0   0.14740E-05  462445.5 3772868.2   380.2     4.50     0.93
4.88     YES
 L0001731         0   0.14740E-05  462447.5 3772868.3   380.2     4.50     0.93
4.88     YES
 L0001732         0   0.14740E-05  462449.5 3772868.3   380.2     4.50     0.93
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4.88	YES						
L0001733	0	0.14740E-05	462451.5	3772868.4	380.1	4.50	0.93
4.88	YES						
L0001734	0	0.14740E-05	462453.5	3772868.4	380.1	4.50	0.93
4.88	YES						
L0001735	0	0.14740E-05	462455.5	3772868.5	380.1	4.50	0.93
4.88	YES						
L0001736	0	0.14740E-05	462457.5	3772868.6	380.1	4.50	0.93
4.88	YES						
L0001737	0	0.14740E-05	462459.5	3772868.6	380.1	4.50	0.93
4.88	YES						
L0001738	0	0.14740E-05	462461.5	3772868.7	380.1	4.50	0.93
4.88	YES						
L0001739	0	0.14740E-05	462463.5	3772868.7	380.1	4.50	0.93
4.88	YES						
L0001740	0	0.14740E-05	462465.5	3772868.8	380.1	4.50	0.93
4.88	YES						
L0001741	0	0.14740E-05	462467.5	3772868.8	380.1	4.50	0.93
4.88	YES						
L0001742	0	0.14740E-05	462469.5	3772868.9	380.1	4.50	0.93
4.88	YES						
L0001743	0	0.14740E-05	462471.5	3772869.0	380.1	4.50	0.93
4.88	YES						
L0001744	0	0.14740E-05	462473.5	3772869.0	380.0	4.50	0.93
4.88	YES						
L0001745	0	0.14740E-05	462475.5	3772869.1	380.0	4.50	0.93
4.88	YES						
L0001746	0	0.14740E-05	462477.5	3772869.1	380.0	4.50	0.93
4.88	YES						
L0001747	0	0.14740E-05	462479.5	3772869.2	380.0	4.50	0.93
4.88	YES						
L0001748	0	0.14740E-05	462481.5	3772869.2	380.0	4.50	0.93
4.88	YES						
L0001749	0	0.14740E-05	462483.5	3772869.3	380.0	4.50	0.93
4.88	YES						
L0001750	0	0.14740E-05	462485.5	3772869.3	380.0	4.50	0.93
4.88	YES						
L0001751	0	0.14740E-05	462487.5	3772869.4	380.0	4.50	0.93
4.88	YES						
L0001752	0	0.14740E-05	462489.5	3772869.5	380.0	4.50	0.93
4.88	YES						
L0001753	0	0.14740E-05	462491.5	3772869.5	380.0	4.50	0.93
4.88	YES						
L0001754	0	0.14740E-05	462493.5	3772869.6	380.0	4.50	0.93
4.88	YES						
L0001755	0	0.14740E-05	462495.5	3772869.6	380.0	4.50	0.93
4.88	YES						
L0001756	0	0.14740E-05	462497.5	3772869.7	380.0	4.50	0.93

4.88 YES
L0001757 0 0.14740E-05 462499.5 3772869.7 380.0 4.50 0.93
4.88 YES
L0001758 0 0.14740E-05 462501.5 3772869.8 380.0 4.50 0.93
4.88 YES
L0001759 0 0.14740E-05 462503.5 3772869.9 380.0 4.50 0.93
4.88 YES
L0001760 0 0.14740E-05 462505.5 3772869.9 380.0 4.50 0.93
4.88 YES
*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001761	0	0.14740E-05	462507.5	3772870.0	380.0	4.50	0.93	4.88	YES	
L0001762	0	0.14740E-05	462509.4	3772870.0	380.0	4.50	0.93	4.88	YES	
L0001763	0	0.14740E-05	462511.4	3772870.1	380.0	4.50	0.93	4.88	YES	
L0001764	0	0.14740E-05	462513.4	3772870.1	380.0	4.50	0.93	4.88	YES	
L0001765	0	0.14740E-05	462515.4	3772870.2	380.0	4.50	0.93	4.88	YES	
L0001766	0	0.14740E-05	462517.4	3772870.3	380.0	4.50	0.93	4.88	YES	
L0001767	0	0.14740E-05	462519.4	3772870.3	379.9	4.50	0.93	4.88	YES	
L0001768	0	0.14740E-05	462521.4	3772870.4	379.9	4.50	0.93	4.88	YES	
L0001769	0	0.14740E-05	462523.4	3772870.4	379.9	4.50	0.93	4.88	YES	
L0001770	0	0.14740E-05	462525.4	3772870.5	379.9	4.50	0.93			

4.88 YES							
L0001771	0	0.14740E-05	462527.4	3772870.5	379.9	4.50	0.93
4.88 YES							
L0001772	0	0.14740E-05	462529.4	3772870.6	379.9	4.50	0.93
4.88 YES							
L0001773	0	0.14740E-05	462531.4	3772870.6	379.9	4.50	0.93
4.88 YES							
L0001774	0	0.14740E-05	462533.4	3772870.7	379.9	4.50	0.93
4.88 YES							
L0001775	0	0.14740E-05	462535.4	3772870.8	379.9	4.50	0.93
4.88 YES							
L0001776	0	0.14740E-05	462537.4	3772870.8	379.9	4.50	0.93
4.88 YES							
L0001777	0	0.14740E-05	462539.4	3772870.9	379.9	4.50	0.93
4.88 YES							
L0001778	0	0.14740E-05	462541.4	3772870.9	379.8	4.50	0.93
4.88 YES							
L0001779	0	0.14740E-05	462543.4	3772871.0	379.8	4.50	0.93
4.88 YES							
L0001780	0	0.14740E-05	462545.4	3772871.0	379.8	4.50	0.93
4.88 YES							
L0001781	0	0.14740E-05	462547.4	3772871.1	379.8	4.50	0.93
4.88 YES							
L0001782	0	0.14740E-05	462549.4	3772871.2	379.8	4.50	0.93
4.88 YES							
L0001783	0	0.14740E-05	462551.4	3772871.2	379.8	4.50	0.93
4.88 YES							
L0001784	0	0.14740E-05	462553.4	3772871.3	379.8	4.50	0.93
4.88 YES							
L0001785	0	0.14740E-05	462555.4	3772871.3	379.7	4.50	0.93
4.88 YES							
L0001786	0	0.14740E-05	462557.4	3772871.4	379.7	4.50	0.93
4.88 YES							
L0001787	0	0.14740E-05	462559.4	3772871.4	379.7	4.50	0.93
4.88 YES							
L0001788	0	0.14740E-05	462561.4	3772871.5	379.7	4.50	0.93
4.88 YES							
L0001789	0	0.14740E-05	462563.4	3772871.6	379.7	4.50	0.93
4.88 YES							
L0001790	0	0.14740E-05	462565.4	3772871.6	379.7	4.50	0.93
4.88 YES							
L0001791	0	0.14740E-05	462567.4	3772871.7	379.7	4.50	0.93
4.88 YES							
L0001792	0	0.14740E-05	462569.4	3772871.7	379.7	4.50	0.93
4.88 YES							
L0001793	0	0.14740E-05	462571.4	3772871.8	379.7	4.50	0.93
4.88 YES							
L0001794	0	0.14740E-05	462573.4	3772871.8	379.6	4.50	0.93

4.88 YES
L0001795 0 0.14740E-05 462575.4 3772871.9 379.6 4.50 0.93
4.88 YES
L0001796 0 0.14740E-05 462577.4 3772871.9 379.6 4.50 0.93
4.88 YES
L0001797 0 0.14740E-05 462579.4 3772872.0 379.6 4.50 0.93
4.88 YES
L0001798 0 0.14740E-05 462581.4 3772872.1 379.6 4.50 0.93
4.88 YES
L0001799 0 0.14740E-05 462583.4 3772872.1 379.6 4.50 0.93
4.88 YES
L0001800 0 0.14740E-05 462585.4 3772872.2 379.6 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0001801	0	0.14740E-05	462587.4	3772872.2	379.6	4.50	0.93	4.88	YES	
L0001802	0	0.14740E-05	462589.4	3772872.3	379.5	4.50	0.93	4.88	YES	
L0001803	0	0.14740E-05	462591.4	3772872.3	379.5	4.50	0.93	4.88	YES	
L0001804	0	0.14740E-05	462593.4	3772872.4	379.5	4.50	0.93	4.88	YES	
L0001805	0	0.14740E-05	462595.4	3772872.5	379.5	4.50	0.93	4.88	YES	
L0001806	0	0.14740E-05	462597.4	3772872.5	379.5	4.50	0.93	4.88	YES	
L0001807	0	0.14740E-05	462599.4	3772872.6	379.5	4.50	0.93	4.88	YES	
L0001808	0	0.14740E-05	462601.4	3772872.6	379.5	4.50	0.93			

4.88	YES							
L0001809		0	0.14740E-05	462603.4	3772872.7	379.5	4.50	0.93
4.88	YES							
L0001810		0	0.14740E-05	462605.4	3772872.7	379.4	4.50	0.93
4.88	YES							
L0001811		0	0.14740E-05	462607.4	3772872.8	379.4	4.50	0.93
4.88	YES							
L0001812		0	0.14740E-05	462609.4	3772872.9	379.4	4.50	0.93
4.88	YES							
L0001813		0	0.14740E-05	462611.4	3772872.9	379.4	4.50	0.93
4.88	YES							
L0001814		0	0.14740E-05	462613.4	3772873.0	379.4	4.50	0.93
4.88	YES							
L0001815		0	0.14740E-05	462615.4	3772873.0	379.4	4.50	0.93
4.88	YES							
L0001816		0	0.14740E-05	462617.4	3772873.1	379.4	4.50	0.93
4.88	YES							
L0001817		0	0.14740E-05	462619.4	3772873.1	379.4	4.50	0.93
4.88	YES							
L0001818		0	0.14740E-05	462621.4	3772873.2	379.4	4.50	0.93
4.88	YES							
L0001819		0	0.14740E-05	462623.4	3772873.2	379.3	4.50	0.93
4.88	YES							
L0001820		0	0.14740E-05	462625.4	3772873.3	379.3	4.50	0.93
4.88	YES							
L0001821		0	0.14740E-05	462627.4	3772873.4	379.3	4.50	0.93
4.88	YES							
L0001822		0	0.14740E-05	462629.4	3772873.4	379.3	4.50	0.93
4.88	YES							
L0001823		0	0.14740E-05	462631.4	3772873.5	379.3	4.50	0.93
4.88	YES							
L0001824		0	0.14740E-05	462633.4	3772873.5	379.3	4.50	0.93
4.88	YES							
L0001825		0	0.14740E-05	462635.4	3772873.6	379.3	4.50	0.93
4.88	YES							
L0001826		0	0.14740E-05	462637.4	3772873.6	379.3	4.50	0.93
4.88	YES							
L0001827		0	0.14740E-05	462639.4	3772873.7	379.3	4.50	0.93
4.88	YES							
L0001828		0	0.14740E-05	462641.4	3772873.8	379.3	4.50	0.93
4.88	YES							
L0001829		0	0.14740E-05	462643.4	3772873.8	379.3	4.50	0.93
4.88	YES							
L0001830		0	0.14740E-05	462645.4	3772873.9	379.3	4.50	0.93
4.88	YES							
L0001831		0	0.14740E-05	462647.4	3772873.9	379.3	4.50	0.93
4.88	YES							
L0001832		0	0.14740E-05	462649.4	3772874.0	379.3	4.50	0.93

4.88 YES
L0001833 0 0.14740E-05 462651.4 3772874.0 379.3 4.50 0.93
4.88 YES
L0001834 0 0.14740E-05 462653.4 3772874.1 379.3 4.50 0.93
4.88 YES
L0001835 0 0.14740E-05 462655.4 3772874.2 379.2 4.50 0.93
4.88 YES
L0001836 0 0.14740E-05 462657.4 3772874.2 379.2 4.50 0.93
4.88 YES
L0001837 0 0.14740E-05 462659.4 3772874.3 379.2 4.50 0.93
4.88 YES
L0001838 0 0.14740E-05 462661.4 3772874.3 379.2 4.50 0.93
4.88 YES
L0001839 0 0.14740E-05 462663.4 3772874.4 379.2 4.50 0.93
4.88 YES
L0001840 0 0.14740E-05 462665.4 3772874.4 379.2 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001841	0	0.14740E-05	462667.4	3772874.5	379.2	4.50	0.93	4.88	YES	
L0001842	0	0.14740E-05	462669.4	3772874.5	379.2	4.50	0.93	4.88	YES	
L0001843	0	0.14740E-05	462671.4	3772874.6	379.2	4.50	0.93	4.88	YES	
L0001844	0	0.14740E-05	462673.4	3772874.7	379.2	4.50	0.93	4.88	YES	
L0001845	0	0.14740E-05	462675.4	3772874.7	379.2	4.50	0.93	4.88	YES	
L0001846	0	0.14740E-05	462677.4	3772874.8	379.2	4.50	0.93			

4.88	YES							
L0001847		0	0.14740E-05	462679.4	3772874.8	379.2	4.50	0.93
4.88	YES							
L0001848		0	0.14740E-05	462681.4	3772874.9	379.2	4.50	0.93
4.88	YES							
L0001849		0	0.14740E-05	462683.4	3772874.9	379.2	4.50	0.93
4.88	YES							
L0001850		0	0.14740E-05	462685.4	3772875.0	379.2	4.50	0.93
4.88	YES							
L0001851		0	0.14740E-05	462687.4	3772875.1	379.2	4.50	0.93
4.88	YES							
L0001852		0	0.14740E-05	462689.4	3772875.1	379.2	4.50	0.93
4.88	YES							
L0001853		0	0.14740E-05	462691.4	3772875.2	379.2	4.50	0.93
4.88	YES							
L0001854		0	0.14740E-05	462693.4	3772875.2	379.2	4.50	0.93
4.88	YES							
L0001855		0	0.14740E-05	462695.4	3772875.3	379.2	4.50	0.93
4.88	YES							
L0001856		0	0.14740E-05	462697.4	3772875.3	379.2	4.50	0.93
4.88	YES							
L0001857		0	0.14740E-05	462699.4	3772875.4	379.1	4.50	0.93
4.88	YES							
L0001858		0	0.14740E-05	462701.4	3772875.5	379.1	4.50	0.93
4.88	YES							
L0001859		0	0.14740E-05	462703.4	3772875.5	379.1	4.50	0.93
4.88	YES							
L0001860		0	0.14740E-05	462705.4	3772875.6	379.1	4.50	0.93
4.88	YES							
L0001861		0	0.14740E-05	462707.4	3772875.6	379.1	4.50	0.93
4.88	YES							
L0001862		0	0.14740E-05	462709.4	3772875.7	379.1	4.50	0.93
4.88	YES							
L0001863		0	0.14740E-05	462711.4	3772875.7	379.1	4.50	0.93
4.88	YES							
L0001864		0	0.14740E-05	462713.4	3772875.8	379.1	4.50	0.93
4.88	YES							
L0001865		0	0.14740E-05	462715.4	3772875.9	379.1	4.50	0.93
4.88	YES							
L0001866		0	0.14740E-05	462717.4	3772875.9	379.1	4.50	0.93
4.88	YES							
L0001867		0	0.14740E-05	462719.4	3772876.0	379.1	4.50	0.93
4.88	YES							
L0001868		0	0.14740E-05	462721.4	3772876.0	379.1	4.50	0.93
4.88	YES							
L0001869		0	0.14740E-05	462723.4	3772876.1	379.1	4.50	0.93
4.88	YES							
L0001870		0	0.14740E-05	462725.4	3772876.1	379.1	4.50	0.93

```
4.88     YES
 L0001871         0   0.14740E-05  462727.4 3772876.2   379.1     4.50     0.93
4.88     YES
 L0001872         0   0.14740E-05  462729.4 3772876.2   379.1     4.50     0.93
4.88     YES
 L0001873         0   0.14740E-05  462731.4 3772876.3   379.0     4.50     0.93
4.88     YES
 L0001874         0   0.14740E-05  462733.4 3772876.4   379.0     4.50     0.93
4.88     YES
 L0001875         0   0.14740E-05  462735.4 3772876.4   379.0     4.50     0.93
4.88     YES
 L0001876         0   0.14740E-05  462737.4 3772876.5   379.0     4.50     0.93
4.88     YES
 L0001877         0   0.14740E-05  462739.4 3772876.5   379.0     4.50     0.93
4.88     YES
 L0001878         0   0.14740E-05  462741.4 3772876.6   379.0     4.50     0.93
4.88     YES
 L0001879         0   0.14740E-05  462743.4 3772876.6   379.0     4.50     0.93
4.88     YES
 L0001880         0   0.14740E-05  462745.4 3772876.7   379.0     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 L0001881         0   0.14740E-05  462747.4 3772876.8   379.0     4.50     0.93
4.88     YES
 L0001882         0   0.14740E-05  462749.4 3772876.8   379.0     4.50     0.93
4.88     YES
 L0001883         0   0.14740E-05  462751.4 3772876.9   379.0     4.50     0.93
4.88     YES
 L0001884         0   0.14740E-05  462753.4 3772876.9   379.0     4.50     0.93
```

4.88	YES							
L0001885		0	0.14740E-05	462755.4	3772877.0	379.0	4.50	0.93
4.88	YES							
L0001886		0	0.14740E-05	462757.3	3772877.0	379.0	4.50	0.93
4.88	YES							
L0001887		0	0.14740E-05	462759.3	3772877.1	379.0	4.50	0.93
4.88	YES							
L0001888		0	0.14740E-05	462761.3	3772877.2	379.0	4.50	0.93
4.88	YES							
L0001889		0	0.14740E-05	462763.3	3772877.2	379.0	4.50	0.93
4.88	YES							
L0001890		0	0.14740E-05	462765.3	3772877.3	379.0	4.50	0.93
4.88	YES							
L0001891		0	0.14740E-05	462767.3	3772877.3	379.0	4.50	0.93
4.88	YES							
L0001892		0	0.14740E-05	462769.3	3772877.4	379.0	4.50	0.93
4.88	YES							
L0001893		0	0.14740E-05	462771.3	3772877.4	379.0	4.50	0.93
4.88	YES							
L0001894		0	0.14740E-05	462773.3	3772877.5	379.0	4.50	0.93
4.88	YES							
L0001895		0	0.14740E-05	462775.3	3772877.5	379.0	4.50	0.93
4.88	YES							
L0001896		0	0.14740E-05	462777.3	3772877.6	378.9	4.50	0.93
4.88	YES							
L0001897		0	0.14740E-05	462779.3	3772877.7	378.9	4.50	0.93
4.88	YES							
L0001898		0	0.14740E-05	462781.3	3772877.7	378.9	4.50	0.93
4.88	YES							
L0001899		0	0.14740E-05	462783.3	3772877.8	378.9	4.50	0.93
4.88	YES							
L0001900		0	0.14740E-05	462785.3	3772877.8	378.9	4.50	0.93
4.88	YES							
L0001901		0	0.14740E-05	462787.3	3772877.9	378.9	4.50	0.93
4.88	YES							
L0001902		0	0.14740E-05	462789.3	3772877.9	378.9	4.50	0.93
4.88	YES							
L0001903		0	0.14740E-05	462791.3	3772878.0	378.9	4.50	0.93
4.88	YES							
L0001904		0	0.14740E-05	462793.3	3772878.1	378.9	4.50	0.93
4.88	YES							
L0001905		0	0.14740E-05	462795.3	3772878.1	378.9	4.50	0.93
4.88	YES							
L0001906		0	0.14740E-05	462797.3	3772878.2	378.9	4.50	0.93
4.88	YES							
L0001907		0	0.14740E-05	462799.3	3772878.2	378.9	4.50	0.93
4.88	YES							
L0001908		0	0.14740E-05	462801.3	3772878.3	378.9	4.50	0.93

```
4.88     YES
 L0001909         0   0.14740E-05  462803.3 3772878.3   378.9     4.50     0.93
4.88     YES
 L0001910         0   0.14740E-05  462805.3 3772878.4   378.9     4.50     0.93
4.88     YES
 L0001911         0   0.14740E-05  462807.3 3772878.5   378.9     4.50     0.93
4.88     YES
 L0001912         0   0.14740E-05  462809.3 3772878.5   378.9     4.50     0.93
4.88     YES
 L0001913         0   0.14740E-05  462811.3 3772878.6   378.9     4.50     0.93
4.88     YES
 L0001914         0   0.14740E-05  462813.3 3772878.6   378.9     4.50     0.93
4.88     YES
 L0001915         0   0.14740E-05  462815.3 3772878.7   378.9     4.50     0.93
4.88     YES
 L0001916         0   0.14740E-05  462817.3 3772878.7   378.9     4.50     0.93
4.88     YES
 L0001917         0   0.14740E-05  462819.3 3772878.8   378.9     4.50     0.93
4.88     YES
 L0001918         0   0.14740E-05  462821.3 3772878.8   378.8     4.50     0.93
4.88     YES
 L0001919         0   0.14740E-05  462823.3 3772878.9   378.8     4.50     0.93
4.88     YES
 L0001920         0   0.14740E-05  462825.3 3772879.0   378.8     4.50     0.93
4.88     YES
```


*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001921	0	0.14740E-05	462827.3	3772879.0	378.8	4.50	0.93	4.88	YES	
L0001922	0	0.14740E-05	462829.3	3772879.1	378.8	4.50	0.93			

4.88 YES							
L0001923	0	0.14740E-05	462831.3	3772879.1	378.8	4.50	0.93
4.88 YES							
L0001924	0	0.14740E-05	462833.3	3772879.2	378.8	4.50	0.93
4.88 YES							
L0001925	0	0.14740E-05	462835.3	3772879.2	378.8	4.50	0.93
4.88 YES							
L0001926	0	0.14740E-05	462837.3	3772879.3	378.8	4.50	0.93
4.88 YES							
L0001927	0	0.14740E-05	462839.3	3772879.4	378.8	4.50	0.93
4.88 YES							
L0001928	0	0.14740E-05	462841.3	3772879.4	378.8	4.50	0.93
4.88 YES							
L0001929	0	0.14740E-05	462843.3	3772879.5	378.8	4.50	0.93
4.88 YES							
L0001930	0	0.14740E-05	462845.3	3772879.5	378.8	4.50	0.93
4.88 YES							
L0001931	0	0.14740E-05	462847.3	3772879.6	378.8	4.50	0.93
4.88 YES							
L0001932	0	0.14740E-05	462849.3	3772879.6	378.8	4.50	0.93
4.88 YES							
L0001933	0	0.14740E-05	462851.3	3772879.7	378.8	4.50	0.93
4.88 YES							
L0001934	0	0.14740E-05	462853.3	3772879.8	378.8	4.50	0.93
4.88 YES							
L0001935	0	0.14740E-05	462855.3	3772879.8	378.8	4.50	0.93
4.88 YES							
L0001936	0	0.14740E-05	462857.3	3772879.9	378.8	4.50	0.93
4.88 YES							
L0001937	0	0.14740E-05	462859.3	3772879.9	378.8	4.50	0.93
4.88 YES							
L0001938	0	0.14740E-05	462861.3	3772880.0	378.8	4.50	0.93
4.88 YES							
L0001939	0	0.14740E-05	462863.3	3772880.0	378.7	4.50	0.93
4.88 YES							
L0001940	0	0.14740E-05	462865.3	3772880.1	378.7	4.50	0.93
4.88 YES							
L0001941	0	0.14740E-05	462867.3	3772880.1	378.7	4.50	0.93
4.88 YES							
L0001942	0	0.14740E-05	462869.3	3772880.2	378.7	4.50	0.93
4.88 YES							
L0001943	0	0.14740E-05	462871.3	3772880.3	378.7	4.50	0.93
4.88 YES							
L0001944	0	0.14740E-05	462873.3	3772880.3	378.7	4.50	0.93
4.88 YES							
L0001945	0	0.14740E-05	462875.3	3772880.4	378.7	4.50	0.93
4.88 YES							
L0001946	0	0.14740E-05	462877.3	3772880.4	378.7	4.50	0.93

```
4.88     YES
 L0001947         0   0.14740E-05  462879.3 3772880.5   378.7     4.50     0.93
4.88     YES
 L0001948         0   0.14740E-05  462881.3 3772880.5   378.7     4.50     0.93
4.88     YES
 L0001949         0   0.14740E-05  462883.3 3772880.6   378.7     4.50     0.93
4.88     YES
 L0001950         0   0.14740E-05  462885.3 3772880.7   378.7     4.50     0.93
4.88     YES
 L0001951         0   0.14740E-05  462887.3 3772880.7   378.7     4.50     0.93
4.88     YES
 L0001952         0   0.14740E-05  462889.3 3772880.8   378.7     4.50     0.93
4.88     YES
 L0001953         0   0.14740E-05  462891.3 3772880.8   378.7     4.50     0.93
4.88     YES
 L0001954         0   0.14740E-05  462893.3 3772880.9   378.7     4.50     0.93
4.88     YES
 L0001955         0   0.14740E-05  462895.3 3772880.9   378.7     4.50     0.93
4.88     YES
 L0001956         0   0.14740E-05  462897.3 3772881.0   378.7     4.50     0.93
4.88     YES
 L0001957         0   0.14740E-05  462899.3 3772881.1   378.6     4.50     0.93
4.88     YES
 L0001958         0   0.14740E-05  462901.3 3772881.1   378.6     4.50     0.93
4.88     YES
 L0001959         0   0.14740E-05  462903.3 3772881.2   378.6     4.50     0.93
4.88     YES
 L0001960         0   0.14740E-05  462905.3 3772881.2   378.6     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                      *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
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L0001961	0	0.14740E-05	462907.3	3772881.3	378.6	4.50	0.93	4.88 YES
L0001962	0	0.14740E-05	462909.3	3772881.3	378.6	4.50	0.93	4.88 YES
L0001963	0	0.14740E-05	462911.3	3772881.4	378.6	4.50	0.93	4.88 YES
L0001964	0	0.14740E-05	462913.3	3772881.5	378.6	4.50	0.93	4.88 YES
L0001965	0	0.14740E-05	462915.3	3772881.5	378.6	4.50	0.93	4.88 YES
L0001966	0	0.14740E-05	462917.3	3772881.6	378.6	4.50	0.93	4.88 YES
L0001967	0	0.14740E-05	462919.3	3772881.6	378.6	4.50	0.93	4.88 YES
L0001968	0	0.14740E-05	462921.3	3772881.7	378.6	4.50	0.93	4.88 YES
L0001969	0	0.14740E-05	462923.3	3772881.7	378.6	4.50	0.93	4.88 YES
L0001970	0	0.14740E-05	462925.3	3772881.8	378.6	4.50	0.93	4.88 YES
L0001971	0	0.14740E-05	462927.3	3772881.8	378.5	4.50	0.93	4.88 YES
L0001972	0	0.14740E-05	462929.3	3772881.9	378.5	4.50	0.93	4.88 YES
L0001973	0	0.14740E-05	462931.3	3772882.0	378.5	4.50	0.93	4.88 YES
L0001974	0	0.14740E-05	462933.3	3772882.0	378.5	4.50	0.93	4.88 YES
L0001975	0	0.14740E-05	462935.3	3772882.1	378.5	4.50	0.93	4.88 YES
L0001976	0	0.14740E-05	462937.3	3772882.1	378.5	4.50	0.93	4.88 YES
L0001977	0	0.14740E-05	462939.3	3772882.2	378.5	4.50	0.93	4.88 YES
L0001978	0	0.14740E-05	462941.3	3772882.2	378.5	4.50	0.93	4.88 YES
L0001979	0	0.14740E-05	462943.3	3772882.3	378.5	4.50	0.93	4.88 YES
L0001980	0	0.14740E-05	462945.3	3772882.4	378.5	4.50	0.93	4.88 YES
L0001981	0	0.14740E-05	462947.3	3772882.4	378.4	4.50	0.93	4.88 YES
L0001982	0	0.14740E-05	462949.3	3772882.5	378.4	4.50	0.93	4.88 YES
L0001983	0	0.14740E-05	462951.3	3772882.5	378.4	4.50	0.93	4.88 YES
L0001984	0	0.14740E-05	462953.3	3772882.6	378.4	4.50	0.93	

4.88 YES
L0001985 0 0.14740E-05 462955.3 3772882.6 378.4 4.50 0.93
4.88 YES
L0001986 0 0.14740E-05 462957.3 3772882.7 378.4 4.50 0.93
4.88 YES
L0001987 0 0.14740E-05 462959.3 3772882.8 378.4 4.50 0.93
4.88 YES
L0001988 0 0.14740E-05 462961.3 3772882.8 378.4 4.50 0.93
4.88 YES
L0001989 0 0.14740E-05 462963.3 3772882.9 378.4 4.50 0.93
4.88 YES
L0001990 0 0.14740E-05 462965.3 3772882.9 378.4 4.50 0.93
4.88 YES
L0001991 0 0.14740E-05 462967.3 3772883.0 378.4 4.50 0.93
4.88 YES
L0001992 0 0.14740E-05 462969.3 3772883.0 378.4 4.50 0.93
4.88 YES
L0001993 0 0.14740E-05 462971.3 3772883.1 378.4 4.50 0.93
4.88 YES
L0001994 0 0.14740E-05 462973.3 3772883.1 378.4 4.50 0.93
4.88 YES
L0001995 0 0.14740E-05 462975.3 3772883.2 378.5 4.50 0.93
4.88 YES
L0001996 0 0.14740E-05 462977.3 3772883.3 378.5 4.50 0.93
4.88 YES
L0001997 0 0.14740E-05 462979.3 3772883.3 378.5 4.50 0.93
4.88 YES
L0001998 0 0.14740E-05 462981.3 3772883.4 378.5 4.50 0.93
4.88 YES
L0001999 0 0.14740E-05 462983.3 3772883.4 378.5 4.50 0.93
4.88 YES
L0002000 0 0.14740E-05 462985.3 3772883.5 378.5 4.50 0.93
4.88 YES

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER PART.	EMISSION RATE (GRAMS/SEC)	X	Y	BASE ELEV.	RELEASE HEIGHT	INIT. SY	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0002001	0	0.14740E-05	462987.3	3772883.5	378.5	4.50	0.93	4.88 YES
L0002002	0	0.14740E-05	462989.3	3772883.6	378.5	4.50	0.93	4.88 YES
L0002003	0	0.14740E-05	462991.3	3772883.7	378.5	4.50	0.93	4.88 YES
L0002004	0	0.14740E-05	462993.3	3772883.7	378.6	4.50	0.93	4.88 YES
L0002005	0	0.14740E-05	462995.3	3772883.8	378.6	4.50	0.93	4.88 YES
L0002006	0	0.14740E-05	462997.3	3772883.8	378.6	4.50	0.93	4.88 YES
L0002007	0	0.14740E-05	462999.3	3772883.9	378.6	4.50	0.93	4.88 YES
L0002008	0	0.14740E-05	463001.3	3772883.9	378.6	4.50	0.93	4.88 YES
L0002009	0	0.14740E-05	463003.3	3772884.0	378.7	4.50	0.93	4.88 YES
L0002010	0	0.14740E-05	463005.3	3772884.1	378.7	4.50	0.93	4.88 YES
L0002011	0	0.14740E-05	463007.2	3772884.1	378.7	4.50	0.93	4.88 YES
L0002012	0	0.14740E-05	463009.2	3772884.2	378.7	4.50	0.93	4.88 YES
L0002013	0	0.14740E-05	463011.2	3772884.2	378.7	4.50	0.93	4.88 YES
L0002014	0	0.14740E-05	463013.2	3772884.3	378.7	4.50	0.93	4.88 YES
L0002015	0	0.14740E-05	463015.2	3772884.3	378.7	4.50	0.93	4.88 YES
L0002016	0	0.14740E-05	463017.2	3772884.4	378.6	4.50	0.93	4.88 YES
L0002017	0	0.14740E-05	463019.2	3772884.4	378.6	4.50	0.93	4.88 YES
L0002018	0	0.14740E-05	463021.2	3772884.5	378.5	4.50	0.93	4.88 YES
L0002019	0	0.14740E-05	463023.2	3772884.6	378.4	4.50	0.93	4.88 YES
L0002020	0	0.14740E-05	463025.2	3772884.6	378.4	4.50	0.93	4.88 YES
L0002021	0	0.14740E-05	463027.2	3772884.7	378.3	4.50	0.93	4.88 YES
L0002022	0	0.14740E-05	463029.2	3772884.7	378.3	4.50	0.93	

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4.88     YES
 L0002023         0   0.14740E-05  463031.2 3772884.8   378.2     4.50     0.93
4.88     YES
 L0002024         0   0.14740E-05  463033.2 3772884.8   378.2     4.50     0.93
4.88     YES
 L0002025         0   0.14740E-05  463035.2 3772884.9   378.1     4.50     0.93
4.88     YES
 L0002026         0   0.14740E-05  463037.2 3772885.0   378.0     4.50     0.93
4.88     YES
 L0002027         0   0.14740E-05  463039.2 3772885.0   378.0     4.50     0.93
4.88     YES
 L0002028         0   0.14740E-05  463041.2 3772885.1   378.0     4.50     0.93
4.88     YES
 L0002029         0   0.14740E-05  463043.2 3772885.1   378.0     4.50     0.93
4.88     YES
 L0002030         0   0.14740E-05  463045.2 3772885.2   377.9     4.50     0.93
4.88     YES
 L0002031         0   0.14740E-05  463047.2 3772885.2   377.9     4.50     0.93
4.88     YES
 L0002032         0   0.14740E-05  463049.2 3772885.3   377.9     4.50     0.93
4.88     YES
 L0002033         0   0.14740E-05  463051.2 3772885.4   377.9     4.50     0.93
4.88     YES
 L0002034         0   0.14740E-05  463053.2 3772885.4   377.9     4.50     0.93
4.88     YES
 L0002035         0   0.14740E-05  463055.2 3772885.5   377.9     4.50     0.93
4.88     YES
 L0002036         0   0.14740E-05  463057.2 3772885.5   377.9     4.50     0.93
4.88     YES
 L0002037         0   0.14740E-05  463059.2 3772885.6   377.8     4.50     0.93
4.88     YES
 L0002038         0   0.14740E-05  463061.2 3772885.6   377.8     4.50     0.93
4.88     YES
 L0002039         0   0.14740E-05  463063.2 3772885.7   377.8     4.50     0.93
4.88     YES
 L0002040         0   0.14740E-05  463065.2 3772885.7   377.8     4.50     0.93
4.88     YES
↟ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	URBAN SOURCE IN SZ	EMISSION RATE SCALAR VARY BY
L0002041	0	0.14740E-05	463067.2	3772885.8	377.9	4.50	0.93	YES	
L0002042	0	0.14740E-05	463069.2	3772885.9	377.9	4.50	0.93	YES	
L0002043	0	0.14740E-05	463071.2	3772885.9	377.9	4.50	0.93	YES	
L0002044	0	0.14740E-05	463073.2	3772886.0	377.9	4.50	0.93	YES	
L0002045	0	0.14740E-05	463075.2	3772886.0	378.0	4.50	0.93	YES	
L0002046	0	0.14740E-05	463077.2	3772886.1	378.0	4.50	0.93	YES	
L0002047	0	0.14740E-05	463079.2	3772886.1	378.1	4.50	0.93	YES	
L0002048	0	0.14740E-05	463081.2	3772886.2	378.1	4.50	0.93	YES	
L0002049	0	0.14740E-05	463083.2	3772886.3	378.1	4.50	0.93	YES	
L0002050	0	0.14740E-05	463085.2	3772886.3	378.2	4.50	0.93	YES	
L0002051	0	0.14740E-05	463087.2	3772886.4	378.2	4.50	0.93	YES	
L0002052	0	0.14740E-05	463089.2	3772886.4	378.2	4.50	0.93	YES	
L0002053	0	0.14740E-05	463091.2	3772886.5	378.2	4.50	0.93	YES	
L0002054	0	0.14740E-05	463093.2	3772886.5	378.2	4.50	0.93	YES	
L0002055	0	0.14740E-05	463095.2	3772886.6	378.2	4.50	0.93	YES	
L0002056	0	0.14740E-05	463097.2	3772886.7	378.2	4.50	0.93	YES	
L0002057	0	0.14740E-05	463099.2	3772886.7	378.2	4.50	0.93	YES	
L0002058	0	0.14740E-05	463101.2	3772886.8	378.2	4.50	0.93	YES	
L0002059	0	0.14740E-05	463103.2	3772886.8	378.2	4.50	0.93	YES	
L0002060	0	0.14740E-05	463105.2	3772886.9	378.2	4.50	0.93		

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4.88     YES
 L0002061         0   0.14740E-05  463107.2 3772886.9   378.2     4.50     0.93
4.88     YES
 L0002062         0   0.14740E-05  463109.2 3772887.0   378.1     4.50     0.93
4.88     YES
 L0002063         0   0.14740E-05  463111.2 3772887.0   378.1     4.50     0.93
4.88     YES
 L0002064         0   0.14740E-05  463113.2 3772887.1   378.1     4.50     0.93
4.88     YES
 L0002065         0   0.14740E-05  463115.2 3772887.2   378.1     4.50     0.93
4.88     YES
 L0002066         0   0.14740E-05  463117.2 3772887.2   378.1     4.50     0.93
4.88     YES
 L0002067         0   0.14740E-05  463119.2 3772887.3   378.1     4.50     0.93
4.88     YES
 L0002068         0   0.14740E-05  463121.2 3772887.3   378.1     4.50     0.93
4.88     YES
 L0002069         0   0.14740E-05  463123.2 3772887.4   378.1     4.50     0.93
4.88     YES
 L0002070         0   0.14740E-05  463125.2 3772887.4   378.1     4.50     0.93
4.88     YES
 L0002071         0   0.14740E-05  463127.2 3772887.5   378.0     4.50     0.93
4.88     YES
 L0002072         0   0.14740E-05  463129.2 3772887.6   378.0     4.50     0.93
4.88     YES
 L0002073         0   0.14740E-05  463131.2 3772887.6   378.0     4.50     0.93
4.88     YES
 L0002074         0   0.14740E-05  463133.2 3772887.7   378.0     4.50     0.93
4.88     YES
 L0002075         0   0.14740E-05  463135.2 3772887.7   378.0     4.50     0.93
4.88     YES
 L0002076         0   0.14740E-05  463137.2 3772887.8   378.0     4.50     0.93
4.88     YES
 L0002077         0   0.14740E-05  463139.2 3772887.8   378.0     4.50     0.93
4.88     YES
 L0002078         0   0.14740E-05  463141.2 3772887.9   378.0     4.50     0.93
4.88     YES
 L0002079         0   0.14740E-05  463143.2 3772888.0   377.9     4.50     0.93
4.88     YES
 L0002080         0   0.14740E-05  463145.2 3772888.0   377.9     4.50     0.93
4.88     YES
↟ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE VARY BY
L0002081	0	0.14740E-05	463147.2	3772888.1	377.9	4.50	0.93	4.88	YES	
L0002082	0	0.14740E-05	463149.2	3772888.1	377.9	4.50	0.93	4.88	YES	
L0002083	0	0.14740E-05	463151.2	3772888.2	377.9	4.50	0.93	4.88	YES	
L0002084	0	0.14740E-05	463153.2	3772888.2	377.9	4.50	0.93	4.88	YES	
L0002085	0	0.14740E-05	463155.2	3772888.3	377.9	4.50	0.93	4.88	YES	
L0002086	0	0.14740E-05	463157.2	3772888.4	377.9	4.50	0.93	4.88	YES	
L0002087	0	0.14740E-05	463159.2	3772888.4	377.9	4.50	0.93	4.88	YES	
L0002088	0	0.14740E-05	463161.2	3772888.5	377.9	4.50	0.93	4.88	YES	
L0002089	0	0.14740E-05	463163.2	3772888.5	377.9	4.50	0.93	4.88	YES	
L0002090	0	0.14740E-05	463165.2	3772888.6	377.9	4.50	0.93	4.88	YES	
L0002091	0	0.14740E-05	463167.2	3772888.6	377.9	4.50	0.93	4.88	YES	
L0002092	0	0.14740E-05	463169.2	3772888.7	377.9	4.50	0.93	4.88	YES	
L0002093	0	0.14740E-05	463171.2	3772888.7	377.9	4.50	0.93	4.88	YES	
L0002094	0	0.14740E-05	463173.2	3772888.8	377.9	4.50	0.93	4.88	YES	
L0002095	0	0.14740E-05	463175.2	3772888.9	377.9	4.50	0.93	4.88	YES	
L0002096	0	0.14740E-05	463177.2	3772888.9	377.8	4.50	0.93	4.88	YES	
L0002097	0	0.14740E-05	463179.2	3772889.0	377.8	4.50	0.93	4.88	YES	
L0002098	0	0.14740E-05	463181.2	3772889.0	377.8	4.50	0.93			

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4.88     YES
 L0002099         0   0.14740E-05  463183.2 3772889.1   377.8     4.50     0.93
4.88     YES
 L0002100         0   0.14740E-05  463185.2 3772889.1   377.8     4.50     0.93
4.88     YES
 L0002101         0   0.14740E-05  463187.2 3772889.2   377.8     4.50     0.93
4.88     YES
 L0002102         0   0.14740E-05  463189.2 3772889.3   377.8     4.50     0.93
4.88     YES
 L0002103         0   0.14740E-05  463191.2 3772889.3   377.8     4.50     0.93
4.88     YES
 L0002104         0   0.14740E-05  463193.2 3772889.4   377.8     4.50     0.93
4.88     YES
 L0002105         0   0.14740E-05  463195.2 3772889.4   377.8     4.50     0.93
4.88     YES
 L0002106         0   0.14740E-05  463197.2 3772889.5   377.8     4.50     0.93
4.88     YES
 L0002107         0   0.14740E-05  463199.2 3772889.5   377.8     4.50     0.93
4.88     YES
 L0002108         0   0.14740E-05  463201.2 3772889.6   377.8     4.50     0.93
4.88     YES
 L0002109         0   0.14740E-05  463203.2 3772889.7   377.8     4.50     0.93
4.88     YES
 L0002110         0   0.14740E-05  463205.2 3772889.7   377.8     4.50     0.93
4.88     YES
 L0002111         0   0.14740E-05  463207.2 3772889.8   377.8     4.50     0.93
4.88     YES
 L0002112         0   0.14740E-05  463209.2 3772889.8   377.8     4.50     0.93
4.88     YES
 L0002113         0   0.14740E-05  463211.2 3772889.9   377.8     4.50     0.93
4.88     YES
 L0002114         0   0.14740E-05  463213.2 3772889.9   377.8     4.50     0.93
4.88     YES
 L0002115         0   0.14740E-05  463215.2 3772890.0   377.8     4.50     0.93
4.88     YES
 L0002116         0   0.14740E-05  463217.2 3772890.0   377.8     4.50     0.93
4.88     YES
 L0002117         0   0.14740E-05  463219.2 3772890.1   377.8     4.50     0.93
4.88     YES
 L0002118         0   0.14740E-05  463221.2 3772890.2   377.8     4.50     0.93
4.88     YES
 L0002119         0   0.14740E-05  463223.2 3772890.2   377.8     4.50     0.93
4.88     YES
 L0002120         0   0.14740E-05  463225.2 3772890.3   377.8     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002121	0	0.14740E-05	463227.2	3772890.3	377.8	4.50	0.93	4.88	YES	
L0002122	0	0.14740E-05	463229.2	3772890.4	377.8	4.50	0.93	4.88	YES	
L0002123	0	0.14740E-05	463231.2	3772890.4	377.8	4.50	0.93	4.88	YES	
L0002124	0	0.14740E-05	463233.2	3772890.5	377.8	4.50	0.93	4.88	YES	
L0002125	0	0.14740E-05	463235.2	3772890.6	377.8	4.50	0.93	4.88	YES	
L0002126	0	0.14740E-05	463237.2	3772890.6	377.8	4.50	0.93	4.88	YES	
L0002127	0	0.14740E-05	463239.2	3772890.7	377.8	4.50	0.93	4.88	YES	
L0002128	0	0.14740E-05	463241.2	3772890.7	377.8	4.50	0.93	4.88	YES	
L0002129	0	0.14740E-05	463243.2	3772890.8	377.8	4.50	0.93	4.88	YES	
L0002130	0	0.14740E-05	463245.2	3772890.8	377.8	4.50	0.93	4.88	YES	
L0002131	0	0.14740E-05	463247.2	3772890.9	377.8	4.50	0.93	4.88	YES	
L0002132	0	0.14740E-05	463249.2	3772891.0	377.8	4.50	0.93	4.88	YES	
L0002133	0	0.14740E-05	463251.2	3772891.0	377.8	4.50	0.93	4.88	YES	
L0002134	0	0.14740E-05	463253.2	3772891.1	377.8	4.50	0.93	4.88	YES	
L0002135	0	0.14740E-05	463255.2	3772891.1	377.8	4.50	0.93	4.88	YES	
L0002136	0	0.14740E-05	463257.1	3772891.2	377.8	4.50	0.93			

4.88 YES							
L0002137	0	0.14740E-05	463259.1	3772891.2	377.8	4.50	0.93
4.88 YES							
L0002138	0	0.14740E-05	463261.1	3772891.3	377.8	4.50	0.93
4.88 YES							
L0002139	0	0.14740E-05	463263.1	3772891.3	377.8	4.50	0.93
4.88 YES							
L0002140	0	0.14740E-05	463265.1	3772891.4	377.8	4.50	0.93
4.88 YES							
L0002141	0	0.14740E-05	463267.1	3772891.5	377.8	4.50	0.93
4.88 YES							
L0002142	0	0.14740E-05	463269.1	3772891.5	377.8	4.50	0.93
4.88 YES							
L0002143	0	0.14740E-05	463271.1	3772891.6	377.8	4.50	0.93
4.88 YES							
L0002144	0	0.14740E-05	463273.1	3772891.6	377.8	4.50	0.93
4.88 YES							
L0002145	0	0.14740E-05	463275.1	3772891.7	377.8	4.50	0.93
4.88 YES							
L0002146	0	0.14740E-05	463277.1	3772891.7	377.8	4.50	0.93
4.88 YES							
L0002147	0	0.14740E-05	463279.1	3772891.8	377.8	4.50	0.93
4.88 YES							
L0002148	0	0.14740E-05	463281.1	3772891.9	377.7	4.50	0.93
4.88 YES							
L0002149	0	0.14740E-05	463283.1	3772891.9	377.7	4.50	0.93
4.88 YES							
L0002150	0	0.14740E-05	463285.1	3772892.0	377.7	4.50	0.93
4.88 YES							
L0002151	0	0.14740E-05	463287.1	3772892.0	377.7	4.50	0.93
4.88 YES							
L0002152	0	0.14740E-05	463289.1	3772892.1	377.7	4.50	0.93
4.88 YES							
L0002153	0	0.14740E-05	463291.1	3772892.1	377.7	4.50	0.93
4.88 YES							
L0002154	0	0.14740E-05	463293.1	3772892.2	377.7	4.50	0.93
4.88 YES							
L0002155	0	0.14740E-05	463295.1	3772892.3	377.7	4.50	0.93
4.88 YES							
L0002156	0	0.14740E-05	463297.1	3772892.3	377.7	4.50	0.93
4.88 YES							
L0002157	0	0.14740E-05	463299.1	3772892.4	377.7	4.50	0.93
4.88 YES							
L0002158	0	0.14740E-05	463301.1	3772892.4	377.7	4.50	0.93
4.88 YES							
L0002159	0	0.14740E-05	463303.1	3772892.5	377.7	4.50	0.93
4.88 YES							
L0002160	0	0.14740E-05	463305.1	3772892.5	377.7	4.50	0.93

4.88 YES
↑ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	EMISSION RATE SCALAR VARY
L0002161	0	0.14740E-05	463307.1	3772892.6	377.7	4.50	0.93	4.88	YES	
L0002162	0	0.14740E-05	463309.1	3772892.6	377.7	4.50	0.93	4.88	YES	
L0002163	0	0.14740E-05	463311.1	3772892.7	377.7	4.50	0.93	4.88	YES	
L0002164	0	0.14740E-05	463313.1	3772892.8	377.7	4.50	0.93	4.88	YES	
L0002165	0	0.14740E-05	463315.1	3772892.8	377.7	4.50	0.93	4.88	YES	
L0002166	0	0.14740E-05	463317.1	3772892.9	377.7	4.50	0.93	4.88	YES	
L0002167	0	0.14740E-05	463319.1	3772892.9	377.7	4.50	0.93	4.88	YES	
L0002168	0	0.14740E-05	463321.1	3772893.0	377.7	4.50	0.93	4.88	YES	
L0002169	0	0.14740E-05	463323.1	3772893.0	377.7	4.50	0.93	4.88	YES	
L0002170	0	0.14740E-05	463325.1	3772893.1	377.7	4.50	0.93	4.88	YES	
L0002171	0	0.14740E-05	463327.1	3772893.2	377.7	4.50	0.93	4.88	YES	
L0002172	0	0.14740E-05	463329.1	3772893.2	377.7	4.50	0.93	4.88	YES	
L0002173	0	0.14740E-05	463331.1	3772893.3	377.7	4.50	0.93	4.88	YES	
L0002174	0	0.14740E-05	463333.1	3772893.3	377.7	4.50	0.93			

4.88 YES							
L0002175	0	0.14740E-05	463335.1	3772893.4	377.6	4.50	0.93
4.88 YES							
L0002176	0	0.14740E-05	463337.1	3772893.4	377.6	4.50	0.93
4.88 YES							
L0002177	0	0.14740E-05	463339.1	3772893.5	377.6	4.50	0.93
4.88 YES							
L0002178	0	0.14740E-05	463341.1	3772893.6	377.6	4.50	0.93
4.88 YES							
L0002179	0	0.14740E-05	463343.1	3772893.6	377.6	4.50	0.93
4.88 YES							
L0002180	0	0.14740E-05	463345.1	3772893.7	377.6	4.50	0.93
4.88 YES							
L0002181	0	0.14740E-05	463347.1	3772893.7	377.6	4.50	0.93
4.88 YES							
L0002182	0	0.14740E-05	463349.1	3772893.8	377.5	4.50	0.93
4.88 YES							
L0002183	0	0.14740E-05	463351.1	3772893.8	377.5	4.50	0.93
4.88 YES							
L0002184	0	0.14740E-05	463353.1	3772893.9	377.4	4.50	0.93
4.88 YES							
L0002185	0	0.14740E-05	463355.1	3772894.0	377.4	4.50	0.93
4.88 YES							
L0002186	0	0.14740E-05	463357.1	3772894.0	377.3	4.50	0.93
4.88 YES							
L0002187	0	0.14740E-05	463359.1	3772894.1	377.2	4.50	0.93
4.88 YES							
L0002188	0	0.14740E-05	463361.1	3772894.1	377.2	4.50	0.93
4.88 YES							
L0002189	0	0.14740E-05	463363.1	3772894.2	377.1	4.50	0.93
4.88 YES							
L0002190	0	0.14740E-05	463365.1	3772894.2	377.1	4.50	0.93
4.88 YES							
L0002191	0	0.14740E-05	463367.1	3772894.3	377.0	4.50	0.93
4.88 YES							
L0002192	0	0.14740E-05	463369.1	3772894.3	377.0	4.50	0.93
4.88 YES							
L0002193	0	0.14740E-05	463371.1	3772894.4	376.9	4.50	0.93
4.88 YES							
L0002194	0	0.14740E-05	463373.1	3772894.5	376.9	4.50	0.93
4.88 YES							
L0002195	0	0.14740E-05	463375.1	3772894.5	376.9	4.50	0.93
4.88 YES							
L0002196	0	0.14740E-05	463377.1	3772894.6	376.9	4.50	0.93
4.88 YES							
L0002197	0	0.14740E-05	463379.1	3772894.6	377.0	4.50	0.93
4.88 YES							
L0002198	0	0.14740E-05	463381.1	3772894.7	377.0	4.50	0.93

4.88 YES
L0002199 0 0.14740E-05 463383.1 3772894.7 377.0 4.50 0.93
4.88 YES
L0002200 0 0.14740E-05 463385.1 3772894.8 377.0 4.50 0.93
4.88 YES
*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE BY	URBAN EMISSION RATE SCALAR VARY
L0002201	0	0.14740E-05	463387.1	3772894.9	377.0	4.50	0.93	4.88	YES	
L0002202	0	0.14740E-05	463389.1	3772894.9	377.1	4.50	0.93	4.88	YES	
L0002203	0	0.14740E-05	463391.1	3772895.0	377.1	4.50	0.93	4.88	YES	
L0002204	0	0.14740E-05	463393.1	3772895.0	377.1	4.50	0.93	4.88	YES	
L0002205	0	0.14740E-05	463395.1	3772895.1	377.1	4.50	0.93	4.88	YES	
L0002206	0	0.14740E-05	463397.1	3772895.1	377.1	4.50	0.93	4.88	YES	
L0002207	0	0.14740E-05	463399.1	3772895.2	377.2	4.50	0.93	4.88	YES	
L0002208	0	0.14740E-05	463401.1	3772895.3	377.2	4.50	0.93	4.88	YES	
L0002209	0	0.14740E-05	463403.1	3772895.3	377.3	4.50	0.93	4.88	YES	
L0002210	0	0.14740E-05	463405.1	3772895.4	377.3	4.50	0.93	4.88	YES	
L0002211	0	0.14740E-05	463407.1	3772895.4	377.4	4.50	0.93	4.88	YES	
L0002212	0	0.14740E-05	463409.1	3772895.5	377.4	4.50	0.93			

4.88 YES							
L0002213	0	0.14740E-05	463411.1	3772895.5	377.5	4.50	0.93
4.88 YES							
L0002214	0	0.14740E-05	463413.1	3772895.6	377.5	4.50	0.93
4.88 YES							
L0002215	0	0.14740E-05	463415.1	3772895.6	377.6	4.50	0.93
4.88 YES							
L0002216	0	0.14740E-05	463417.1	3772895.7	377.6	4.50	0.93
4.88 YES							
L0002217	0	0.14740E-05	463419.1	3772895.8	377.7	4.50	0.93
4.88 YES							
L0002218	0	0.14740E-05	463421.1	3772895.8	377.7	4.50	0.93
4.88 YES							
L0002219	0	0.14740E-05	463423.1	3772895.9	377.8	4.50	0.93
4.88 YES							
L0002220	0	0.14740E-05	463425.1	3772895.9	377.7	4.50	0.93
4.88 YES							
L0002221	0	0.14740E-05	463427.1	3772896.0	377.7	4.50	0.93
4.88 YES							
L0002222	0	0.14740E-05	463429.1	3772896.0	377.7	4.50	0.93
4.88 YES							
L0002223	0	0.14740E-05	463431.1	3772896.1	377.7	4.50	0.93
4.88 YES							
L0002224	0	0.14740E-05	463433.1	3772896.2	377.7	4.50	0.93
4.88 YES							
L0002225	0	0.14740E-05	463435.1	3772896.2	377.6	4.50	0.93
4.88 YES							
L0002226	0	0.14740E-05	463437.1	3772896.3	377.6	4.50	0.93
4.88 YES							
L0002227	0	0.14740E-05	463439.1	3772896.3	377.6	4.50	0.93
4.88 YES							
L0002228	0	0.14740E-05	463441.1	3772896.4	377.6	4.50	0.93
4.88 YES							
L0002229	0	0.14740E-05	463443.1	3772896.4	377.6	4.50	0.93
4.88 YES							
L0002230	0	0.14740E-05	463445.1	3772896.5	377.6	4.50	0.93
4.88 YES							
L0002231	0	0.14740E-05	463447.1	3772896.6	377.5	4.50	0.93
4.88 YES							
L0002232	0	0.14740E-05	463449.1	3772896.6	377.5	4.50	0.93
4.88 YES							
L0002233	0	0.14740E-05	463451.1	3772896.7	377.5	4.50	0.93
4.88 YES							
L0002234	0	0.14740E-05	463453.1	3772896.7	377.5	4.50	0.93
4.88 YES							
L0002235	0	0.14740E-05	463455.1	3772896.8	377.4	4.50	0.93
4.88 YES							
L0002236	0	0.14740E-05	463457.1	3772896.8	377.4	4.50	0.93

```
4.88     YES
 L0002237         0   0.14740E-05  463459.1 3772896.9   377.4     4.50     0.93
4.88     YES
 L0002238         0   0.14740E-05  463461.1 3772896.9   377.4     4.50     0.93
4.88     YES
 L0002239         0   0.14740E-05  463463.1 3772897.0   377.3     4.50     0.93
4.88     YES
 L0002240         0   0.14740E-05  463465.1 3772897.1   377.3     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

 L0002241         0   0.14740E-05  463467.1 3772897.1   377.3     4.50     0.93
4.88     YES
 L0002242         0   0.14740E-05  463469.1 3772897.2   377.3     4.50     0.93
4.88     YES
 L0002243         0   0.14740E-05  463471.1 3772897.2   377.2     4.50     0.93
4.88     YES
 L0002244         0   0.14740E-05  463473.1 3772897.3   377.2     4.50     0.93
4.88     YES
 L0002245         0   0.14740E-05  463475.1 3772897.3   377.2     4.50     0.93
4.88     YES
 L0002246         0   0.14740E-05  463477.1 3772897.4   377.2     4.50     0.93
4.88     YES
 L0002247         0   0.14740E-05  463479.1 3772897.5   377.2     4.50     0.93
4.88     YES
 L0002248         0   0.14740E-05  463481.1 3772897.5   377.2     4.50     0.93
4.88     YES
 L0002249         0   0.14740E-05  463483.1 3772897.6   377.1     4.50     0.93
4.88     YES
 L0002250         0   0.14740E-05  463485.1 3772897.6   377.1     4.50     0.93
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4.88	YES							
L0002251		0	0.14740E-05	463487.1	3772897.7	377.1	4.50	0.93
4.88	YES							
L0002252		0	0.14740E-05	463489.1	3772897.7	377.1	4.50	0.93
4.88	YES							
L0002253		0	0.14740E-05	463491.1	3772897.8	377.1	4.50	0.93
4.88	YES							
L0002254		0	0.14740E-05	463493.1	3772897.9	377.1	4.50	0.93
4.88	YES							
L0002255		0	0.14740E-05	463495.1	3772897.9	377.0	4.50	0.93
4.88	YES							
L0002256		0	0.14740E-05	463497.1	3772898.0	377.0	4.50	0.93
4.88	YES							
L0002257		0	0.14740E-05	463499.1	3772898.0	377.0	4.50	0.93
4.88	YES							
L0002258		0	0.14740E-05	463501.1	3772898.1	377.0	4.50	0.93
4.88	YES							
L0002259		0	0.14740E-05	463503.1	3772898.1	377.0	4.50	0.93
4.88	YES							
L0002260		0	0.14740E-05	463505.1	3772898.2	377.0	4.50	0.93
4.88	YES							
L0002261		0	0.14740E-05	463507.0	3772898.2	376.9	4.50	0.93
4.88	YES							
L0002262		0	0.14740E-05	463509.0	3772898.3	376.9	4.50	0.93
4.88	YES							
L0002263		0	0.14740E-05	463511.0	3772898.4	376.9	4.50	0.93
4.88	YES							
L0002264		0	0.14740E-05	463513.0	3772898.4	376.9	4.50	0.93
4.88	YES							
L0002265		0	0.14740E-05	463515.0	3772898.5	376.9	4.50	0.93
4.88	YES							
L0002266		0	0.14740E-05	463517.0	3772898.5	376.9	4.50	0.93
4.88	YES							
L0002267		0	0.14740E-05	463519.0	3772898.6	376.9	4.50	0.93
4.88	YES							
L0002268		0	0.14740E-05	463521.0	3772898.6	376.8	4.50	0.93
4.88	YES							
L0002269		0	0.14740E-05	463523.0	3772898.7	376.8	4.50	0.93
4.88	YES							
L0002270		0	0.14740E-05	463525.0	3772898.8	376.8	4.50	0.93
4.88	YES							
L0002271		0	0.14740E-05	463527.0	3772898.8	376.8	4.50	0.93
4.88	YES							
L0002272		0	0.14740E-05	463529.0	3772898.9	376.8	4.50	0.93
4.88	YES							
L0002273		0	0.14740E-05	463531.0	3772898.9	376.7	4.50	0.93
4.88	YES							
L0002274		0	0.14740E-05	463533.0	3772899.0	376.7	4.50	0.93

```
4.88     YES
 L0002275         0   0.14740E-05  463535.0 3772899.0   376.7     4.50     0.93
4.88     YES
 L0002276         0   0.14740E-05  463537.0 3772899.1   376.7     4.50     0.93
4.88     YES
 L0002277         0   0.14740E-05  463539.0 3772899.2   376.7     4.50     0.93
4.88     YES
 L0002278         0   0.14740E-05  463541.0 3772899.2   376.6     4.50     0.93
4.88     YES
 L0002279         0   0.14740E-05  463543.0 3772899.3   376.6     4.50     0.93
4.88     YES
 L0002280         0   0.14740E-05  463545.0 3772899.3   376.6     4.50     0.93
4.88     YES
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                    *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
INIT.   URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
SZ     SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

 L0002281         0   0.14740E-05  463547.0 3772899.4   376.6     4.50     0.93
4.88     YES
 L0002282         0   0.14740E-05  463549.0 3772899.4   376.6     4.50     0.93
4.88     YES
 L0002283         0   0.14740E-05  463551.0 3772899.5   376.5     4.50     0.93
4.88     YES
 L0002284         0   0.14740E-05  463553.0 3772899.5   376.5     4.50     0.93
4.88     YES
 L0002285         0   0.14740E-05  463555.0 3772899.6   376.5     4.50     0.93
4.88     YES
 L0002286         0   0.14740E-05  463557.0 3772899.7   376.4     4.50     0.93
4.88     YES
 L0002287         0   0.14740E-05  463559.0 3772899.7   376.4     4.50     0.93
4.88     YES
 L0002288         0   0.14740E-05  463561.0 3772899.8   376.4     4.50     0.93
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4.88     YES
 L0002289         0   0.14740E-05  463563.0 3772899.8   376.4     4.50     0.93
4.88     YES
 L0002290         0   0.14740E-05  463565.0 3772899.9   376.3     4.50     0.93
4.88     YES
 L0002291         0   0.14740E-05  463567.0 3772899.9   376.3     4.50     0.93
4.88     YES
 L0002292         0   0.14740E-05  463569.0 3772900.0   376.3     4.50     0.93
4.88     YES
 L0002293         0   0.14740E-05  463571.0 3772900.1   376.2     4.50     0.93
4.88     YES
 L0002294         0   0.14740E-05  463573.0 3772900.1   376.2     4.50     0.93
4.88     YES
 L0002295         0   0.14740E-05  463575.0 3772900.2   376.2     4.50     0.93
4.88     YES
 L0002296         0   0.14740E-05  463577.0 3772900.2   376.1     4.50     0.93
4.88     YES
 L0002297         0   0.14740E-05  463579.0 3772900.3   376.1     4.50     0.93
4.88     YES
 L0002298         0   0.14740E-05  463581.0 3772900.3   376.1     4.50     0.93
4.88     YES
 L0002299         0   0.14740E-05  463583.0 3772900.4   376.1     4.50     0.93
4.88     YES
 L0002300         0   0.14740E-05  463585.0 3772900.5   376.1     4.50     0.93
4.88     YES
 L0002301         0   0.14740E-05  463587.0 3772900.5   376.1     4.50     0.93
4.88     YES
 L0002302         0   0.14740E-05  463589.0 3772900.6   376.1     4.50     0.93
4.88     YES
 L0002303         0   0.14740E-05  463591.0 3772900.6   376.0     4.50     0.93
4.88     YES
 L0002304         0   0.14740E-05  463593.0 3772900.7   376.0     4.50     0.93
4.88     YES
 L0002305         0   0.14740E-05  463595.0 3772900.7   376.0     4.50     0.93
4.88     YES
 L0002306         0   0.14740E-05  463597.0 3772900.8   376.0     4.50     0.93
4.88     YES
↑ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***
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SRCGROUP ID	SOURCE IDs
ALL	L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 ,
	L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 ,
	L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 ,
	L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 ,
	L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 ,
	L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,
	L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 , L0000056 ,
	L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 , L0000063 , L0000064 ,
	L0000065 , L0000066 , L0000067 , L0000068 , L0000069 , L0000070 , L0000071 , L0000072 ,
	L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 ,
	L0000081 , L0000082 , L0000083 , L0000084 , L0000085 , L0000086 , L0000087 , L0000088 ,
	L0000089 , L0000090 , L0000091 , L0000092 , L0000093 , L0000094 , L0000095 , L0000096 ,
	L0000097 , L0000098 , L0000099 , L0000100 , L0000101 , L0000102 , L0000103 , L0000104 ,
	L0000105 , L0000106 , L0000107 , L0000108 , L0000109 , L0000110 , L0000111 , L0000112 ,
	L0000113 , L0000114 , L0000115 , L0000116 , L0000117 , L0000118 , L0000119 , L0000120 ,

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L0000126    , L0000127    , L0000128    ,

             L0000129    , L0000130    , L0000131    , L0000132    , L0000133    ,
L0000134    , L0000135    , L0000136    ,

             L0000137    , L0000138    , L0000139    , L0000140    , L0000141    ,
L0000142    , L0000143    , L0000144    ,

             L0000145    , L0000146    , L0000147    , L0000148    , L0000149    ,
L0000150    , L0000151    , L0000152    ,

             L0000153    , L0000154    , L0000155    , L0000156    , L0000157    ,
L0000158    , L0000159    , L0000160    ,
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                                *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                                SOURCE IDs
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             L0000161    , L0000162    , L0000163    , L0000164    , L0000165    ,
L0000166    , L0000167    , L0000168    ,

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L0000174    , L0000175    , L0000176    ,

             L0000177    , L0000178    , L0000179    , L0000180    , L0000181    ,
L0000182    , L0000183    , L0000184    ,

             L0000185    , L0000186    , L0000187    , L0000188    , L0000189    ,
L0000190    , L0000191    , L0000192    ,

             L0000193    , L0000194    , L0000195    , L0000196    , L0000197    ,
L0000198    , L0000199    , L0000200    ,

             L0000201    , L0000202    , L0000203    , L0000204    , L0000205    ,
L0000206    , L0000207    , L0000208    ,
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L0000214 , L0000215 , L0000216 ,

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L0000230 , L0000231 , L0000232 ,

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L0000238 , L0000239 , L0000240 ,

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L0000246 , L0000247 , L0000248 ,

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L0000310 , L0000311 , L0000312 ,

L0000313 , L0000314 , L0000315 , L0000316 , L0000317 ,
L0000318 , L0000319 , L0000320 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0000321 , L0000322 , L0000323 , L0000324 , L0000325 , L0000326 , L0000327 , L0000328 ,
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	L0000337 , L0000338 , L0000339 , L0000340 , L0000341 , L0000342 , L0000343 , L0000344 ,
	L0000345 , L0000346 , L0000347 , L0000348 , L0000349 , L0000350 , L0000351 , L0000352 ,
	L0000353 , L0000354 , L0000355 , L0000356 , L0000357 , L0000358 , L0000359 , L0000360 ,
	L0000361 , L0000362 , L0000363 , L0000364 , L0000365 , L0000366 , L0000367 , L0000368 ,
	L0000369 , L0000370 , L0000371 , L0000372 , L0000373 , L0000374 , L0000375 , L0000376 ,
	L0000377 , L0000378 , L0000379 , L0000380 , L0000381 , L0000382 , L0000383 , L0000384 ,
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	L0000409 , L0000410 , L0000411 , L0000412 , L0000413 , L0000414 , L0000415 , L0000416 ,
	L0000417 , L0000418 , L0000419 , L0000420 , L0000421 , L0000422 , L0000423 , L0000424 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0000513 , L0000514 , L0000515 , L0000516 , L0000517 ,
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             L0000585    , L0000586    , L0000587    , L0000588    , L0000589    ,
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L0000622    , L0000623    , L0000624    ,

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L0000630    , L0000631    , L0000632    ,

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L0000638    , L0000639    , L0000640    ,
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0000657 , L0000658 , L0000659 , L0000660 , L0000661 , L0000662 , L0000663 , L0000664 ,
	L0000665 , L0000666 , L0000667 , L0000668 , L0000669 , L0000670 , L0000671 , L0000672 ,
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	L0000681 , L0000682 , L0000683 , L0000684 , L0000685 , L0000686 , L0000687 , L0000688 ,
	L0000689 , L0000690 , L0000691 , L0000692 , L0000693 , L0000694 , L0000695 , L0000696 ,
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	L0000713 , L0000714 , L0000715 , L0000716 , L0000717 , L0000718 , L0000719 , L0000720 ,
	L0000721 , L0000722 , L0000723 , L0000724 , L0000725 , L0000726 , L0000727 , L0000728 ,
	L0000729 , L0000730 , L0000731 , L0000732 , L0000733 , L0000734 , L0000735 , L0000736 ,

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0000822 , L0000823 , L0000824 ,

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L0000918 , L0000919 , L0000920 ,

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↟ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0000977 , L0000978 , L0000979 , L0000980 , L0000981 , L0000982 , L0000983 , L0000984 ,
	L0000985 , L0000986 , L0000987 , L0000988 , L0000989 , L0000990 , L0000991 , L0000992 ,
	L0000993 , L0000994 , L0000995 , L0000996 , L0000997 , L0000998 , L0000999 , L0001000 ,
	L0001001 , L0001002 , L0001003 , L0001004 , L0001005 , L0001006 , L0001007 , L0001008 ,
	L0001009 , L0001010 , L0001011 , L0001012 , L0001013 , L0001014 , L0001015 , L0001016 ,
	L0001017 , L0001018 , L0001019 , L0001020 , L0001021 , L0001022 , L0001023 , L0001024 ,
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	L0001033 , L0001034 , L0001035 , L0001036 , L0001037 , L0001038 , L0001039 , L0001040 ,
	L0001041 , L0001042 , L0001043 , L0001044 , L0001045 , L0001046 , L0001047 , L0001048 ,

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L0001070    , L0001071    , L0001072    ,

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L0001078    , L0001079    , L0001080    ,

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             L0001097    , L0001098    , L0001099    , L0001100    , L0001101    ,
L0001102    , L0001103    , L0001104    ,

             L0001105    , L0001106    , L0001107    , L0001108    , L0001109    ,
L0001110    , L0001111    , L0001112    ,

             L0001113    , L0001114    , L0001115    , L0001116    , L0001117    ,
L0001118    , L0001119    , L0001120    ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0001134    , L0001135    , L0001136    ,
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L0001137 , L0001138 , L0001139 , L0001140 , L0001141 , L0001142 , L0001143 , L0001144 ,

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L0001153 , L0001154 , L0001155 , L0001156 , L0001157 , L0001158 , L0001159 , L0001160 ,

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L0001169 , L0001170 , L0001171 , L0001172 , L0001173 , L0001174 , L0001175 , L0001176 ,

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L0001225 , L0001226 , L0001227 , L0001228 , L0001229 , L0001230 , L0001231 , L0001232 ,

L0001233 , L0001234 , L0001235 , L0001236 , L0001237 , L0001238 , L0001239 , L0001240 ,

L0001241 , L0001242 , L0001243 , L0001244 , L0001245 , L0001246 , L0001247 , L0001248 ,

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0001430 , L0001431 , L0001432 ,

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L0001438 , L0001439 , L0001440 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0001694 , L0001695 , L0001696 ,

L0001697 , L0001698 , L0001699 , L0001700 , L0001701 ,
L0001702 , L0001703 , L0001704 ,

L0001705 , L0001706 , L0001707 , L0001708 , L0001709 ,
L0001710 , L0001711 , L0001712 ,

L0001713 , L0001714 , L0001715 , L0001716 , L0001717 ,
L0001718 , L0001719 , L0001720 ,

L0001721 , L0001722 , L0001723 , L0001724 , L0001725 ,
L0001726 , L0001727 , L0001728 ,

L0001729 , L0001730 , L0001731 , L0001732 , L0001733 ,
L0001734 , L0001735 , L0001736 ,

L0001737 , L0001738 , L0001739 , L0001740 , L0001741 ,
L0001742 , L0001743 , L0001744 ,

L0001745 , L0001746 , L0001747 , L0001748 , L0001749 ,
L0001750 , L0001751 , L0001752 ,

L0001753 , L0001754 , L0001755 , L0001756 , L0001757 ,
L0001758 , L0001759 , L0001760 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0001809 , L0001810 , L0001811 , L0001812 , L0001813 , L0001814 , L0001815 , L0001816 ,

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L0001910 , L0001911 , L0001912 ,

L0001913 , L0001914 , L0001915 , L0001916 , L0001917 ,
L0001918 , L0001919 , L0001920 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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L0001942 , L0001943 , L0001944 ,

L0001945 , L0001946 , L0001947 , L0001948 , L0001949 ,
L0001950 , L0001951 , L0001952 ,

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L0001969 , L0001970 , L0001971 , L0001972 , L0001973 ,
L0001974 , L0001975 , L0001976 ,

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L0001998    , L0001999    , L0002000    ,

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L0002006    , L0002007    , L0002008    ,

             L0002009    , L0002010    , L0002011    , L0002012    , L0002013    ,
L0002014    , L0002015    , L0002016    ,

             L0002017    , L0002018    , L0002019    , L0002020    , L0002021    ,
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             L0002025    , L0002026    , L0002027    , L0002028    , L0002029    ,
L0002030    , L0002031    , L0002032    ,

             L0002033    , L0002034    , L0002035    , L0002036    , L0002037    ,
L0002038    , L0002039    , L0002040    ,

             L0002041    , L0002042    , L0002043    , L0002044    , L0002045    ,
L0002046    , L0002047    , L0002048    ,

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             L0002057    , L0002058    , L0002059    , L0002060    , L0002061    ,
L0002062    , L0002063    , L0002064    ,

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L0002070    , L0002071    , L0002072    ,

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L0002078    , L0002079    , L0002080    ,
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                      ***        18:21:03

                                  PAGE  73
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0002081 , L0002082 , L0002083 , L0002084 , L0002085 , L0002086 , L0002087 , L0002088 ,
	L0002089 , L0002090 , L0002091 , L0002092 , L0002093 , L0002094 , L0002095 , L0002096 ,
	L0002097 , L0002098 , L0002099 , L0002100 , L0002101 , L0002102 , L0002103 , L0002104 ,
	L0002105 , L0002106 , L0002107 , L0002108 , L0002109 , L0002110 , L0002111 , L0002112 ,
	L0002113 , L0002114 , L0002115 , L0002116 , L0002117 , L0002118 , L0002119 , L0002120 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0002241 , L0002242 , L0002243 , L0002244 , L0002245 ,
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L0002305 , L0002306 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 ,
		L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 ,
		L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 , L0000031 , L0000032 ,
		L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 , L0000039 , L0000040 ,
		L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 , L0000047 , L0000048 ,
		L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 , L0000055 , L0000056 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0000177 , L0000178 , L0000179 , L0000180 , L0000181 , L0000182 , L0000183 , L0000184 ,
		L0000185 , L0000186 , L0000187 , L0000188 , L0000189 , L0000190 , L0000191 , L0000192 ,
		L0000193 , L0000194 , L0000195 , L0000196 , L0000197 , L0000198 , L0000199 , L0000200 ,
		L0000201 , L0000202 , L0000203 , L0000204 , L0000205 , L0000206 , L0000207 , L0000208 ,
		L0000209 , L0000210 , L0000211 , L0000212 , L0000213 , L0000214 , L0000215 , L0000216 ,
		L0000217 , L0000218 , L0000219 , L0000220 , L0000221 , L0000222 , L0000223 , L0000224 ,
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		L0000233 , L0000234 , L0000235 , L0000236 , L0000237 , L0000238 , L0000239 , L0000240 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0000481 , L0000482 , L0000483 , L0000484 , L0000485 , L0000486 , L0000487 , L0000488 ,

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L0000582 , L0000583 , L0000584 ,

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L0000638 , L0000639 , L0000640 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0000641 , L0000642 , L0000643 , L0000644 , L0000645 ,
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L0000662 , L0000663 , L0000664 ,

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L0000742 , L0000743 , L0000744 ,

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L0000785 , L0000786 , L0000787 , L0000788 , L0000789 ,
L0000790 , L0000791 , L0000792 ,

L0000793 , L0000794 , L0000795 , L0000796 , L0000797 ,

L0000798 , L0000799 , L0000800 ,
↟ *** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** ***
*** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0000801 , L0000802 , L0000803 , L0000804 , L0000805 , L0000806 , L0000807 , L0000808 ,

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L0000825 , L0000826 , L0000827 , L0000828 , L0000829 , L0000830 , L0000831 , L0000832 ,

L0000833 , L0000834 , L0000835 , L0000836 , L0000837 , L0000838 , L0000839 , L0000840 ,

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L0000886 , L0000887 , L0000888 ,

L0000889 , L0000890 , L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 ,

L0000897 , L0000898 , L0000899 , L0000900 , L0000901 , L0000902 , L0000903 , L0000904 ,

L0000905 , L0000906 , L0000907 , L0000908 , L0000909 , L0000910 , L0000911 , L0000912 ,

L0000913 , L0000914 , L0000915 , L0000916 , L0000917 , L0000918 , L0000919 , L0000920 ,

L0000921 , L0000922 , L0000923 , L0000924 , L0000925 , L0000926 , L0000927 , L0000928 ,

L0000929 , L0000930 , L0000931 , L0000932 , L0000933 , L0000934 , L0000935 , L0000936 ,

L0000937 , L0000938 , L0000939 , L0000940 , L0000941 , L0000942 , L0000943 , L0000944 ,

L0000945 , L0000946 , L0000947 , L0000948 , L0000949 , L0000950 , L0000951 , L0000952 ,

L0000953 , L0000954 , L0000955 , L0000956 , L0000957 , L0000958 , L0000959 , L0000960 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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L0000969 , L0000970 , L0000971 , L0000972 , L0000973 ,

L0000974 , L0000975 , L0000976 ,

L0000977 , L0000978 , L0000979 , L0000980 , L0000981 ,
L0000982 , L0000983 , L0000984 ,

L0000985 , L0000986 , L0000987 , L0000988 , L0000989 ,
L0000990 , L0000991 , L0000992 ,

L0000993 , L0000994 , L0000995 , L0000996 , L0000997 ,
L0000998 , L0000999 , L0001000 ,

L0001001 , L0001002 , L0001003 , L0001004 , L0001005 ,
L0001006 , L0001007 , L0001008 ,

L0001009 , L0001010 , L0001011 , L0001012 , L0001013 ,
L0001014 , L0001015 , L0001016 ,

L0001017 , L0001018 , L0001019 , L0001020 , L0001021 ,
L0001022 , L0001023 , L0001024 ,

L0001025 , L0001026 , L0001027 , L0001028 , L0001029 ,
L0001030 , L0001031 , L0001032 ,

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L0001046 , L0001047 , L0001048 ,

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L0001054 , L0001055 , L0001056 ,

L0001057 , L0001058 , L0001059 , L0001060 , L0001061 ,
L0001062 , L0001063 , L0001064 ,

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L0001070 , L0001071 , L0001072 ,

L0001073 , L0001074 , L0001075 , L0001076 , L0001077 ,
L0001078 , L0001079 , L0001080 ,

L0001081 , L0001082 , L0001083 , L0001084 , L0001085 ,
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L0001102 , L0001103 , L0001104 ,

L0001105 , L0001106 , L0001107 , L0001108 , L0001109 ,
L0001110 , L0001111 , L0001112 ,

L0001113 , L0001114 , L0001115 , L0001116 , L0001117 ,
L0001118 , L0001119 , L0001120 ,
*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** *** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0001121 , L0001122 , L0001123 , L0001124 , L0001125 ,
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L0001129 , L0001130 , L0001131 , L0001132 , L0001133 ,
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L0001137 , L0001138 , L0001139 , L0001140 , L0001141 ,
L0001142 , L0001143 , L0001144 ,

L0001145 , L0001146 , L0001147 , L0001148 , L0001149 ,
L0001150 , L0001151 , L0001152 ,

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L0001161 , L0001162 , L0001163 , L0001164 , L0001165 ,
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L0001249 , L0001250 , L0001251 , L0001252 , L0001253 ,
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L0001257 , L0001258 , L0001259 , L0001260 , L0001261 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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L0001321 , L0001322 , L0001323 , L0001324 , L0001325 , L0001326 , L0001327 , L0001328 ,

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
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		L0001617 , L0001618 , L0001619 , L0001620 , L0001621 , L0001622 , L0001623 , L0001624 ,
		L0001625 , L0001626 , L0001627 , L0001628 , L0001629 , L0001630 , L0001631 , L0001632 ,
		L0001633 , L0001634 , L0001635 , L0001636 , L0001637 , L0001638 , L0001639 , L0001640 ,
		L0001641 , L0001642 , L0001643 , L0001644 , L0001645 , L0001646 , L0001647 , L0001648 ,
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		L0001665 , L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 ,
		L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0001761 , L0001762 , L0001763 , L0001764 , L0001765 ,
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*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

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L0002017 , L0002018 , L0002019 , L0002020 , L0002021 ,
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L0002025 , L0002026 , L0002027 , L0002028 , L0002029 ,
L0002030 , L0002031 , L0002032 ,

L0002033 , L0002034 , L0002035 , L0002036 , L0002037 ,
L0002038 , L0002039 , L0002040 ,

L0002041 , L0002042 , L0002043 , L0002044 , L0002045 ,
L0002046 , L0002047 , L0002048 ,

L0002049 , L0002050 , L0002051 , L0002052 , L0002053 ,
L0002054 , L0002055 , L0002056 ,

L0002057 , L0002058 , L0002059 , L0002060 , L0002061 ,
L0002062 , L0002063 , L0002064 ,

L0002065 , L0002066 , L0002067 , L0002068 , L0002069 ,
L0002070 , L0002071 , L0002072 ,

L0002073 , L0002074 , L0002075 , L0002076 , L0002077 ,
L0002078 , L0002079 , L0002080 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0002081 , L0002082 , L0002083 , L0002084 , L0002085 ,
L0002086 , L0002087 , L0002088 ,

L0002089 , L0002090 , L0002091 , L0002092 , L0002093 ,
L0002094 , L0002095 , L0002096 ,

L0002097 , L0002098 , L0002099 , L0002100 , L0002101 ,

L0002102 , L0002103 , L0002104 ,

L0002105 , L0002106 , L0002107 , L0002108 , L0002109 ,
L0002110 , L0002111 , L0002112 ,

L0002113 , L0002114 , L0002115 , L0002116 , L0002117 ,
L0002118 , L0002119 , L0002120 ,

L0002121 , L0002122 , L0002123 , L0002124 , L0002125 ,
L0002126 , L0002127 , L0002128 ,

L0002129 , L0002130 , L0002131 , L0002132 , L0002133 ,
L0002134 , L0002135 , L0002136 ,

L0002137 , L0002138 , L0002139 , L0002140 , L0002141 ,
L0002142 , L0002143 , L0002144 ,

L0002145 , L0002146 , L0002147 , L0002148 , L0002149 ,
L0002150 , L0002151 , L0002152 ,

L0002153 , L0002154 , L0002155 , L0002156 , L0002157 ,
L0002158 , L0002159 , L0002160 ,

L0002161 , L0002162 , L0002163 , L0002164 , L0002165 ,
L0002166 , L0002167 , L0002168 ,

L0002169 , L0002170 , L0002171 , L0002172 , L0002173 ,
L0002174 , L0002175 , L0002176 ,

L0002177 , L0002178 , L0002179 , L0002180 , L0002181 ,
L0002182 , L0002183 , L0002184 ,

L0002185 , L0002186 , L0002187 , L0002188 , L0002189 ,
L0002190 , L0002191 , L0002192 ,

L0002193 , L0002194 , L0002195 , L0002196 , L0002197 ,
L0002198 , L0002199 , L0002200 ,

L0002201 , L0002202 , L0002203 , L0002204 , L0002205 ,
L0002206 , L0002207 , L0002208 ,

L0002209 , L0002210 , L0002211 , L0002212 , L0002213 ,
L0002214 , L0002215 , L0002216 ,

L0002217 , L0002218 , L0002219 , L0002220 , L0002221 ,
L0002222 , L0002223 , L0002224 ,

L0002225 , L0002226 , L0002227 , L0002228 , L0002229 ,

L0002230 , L0002231 , L0002232 ,

L0002233 , L0002234 , L0002235 , L0002236 , L0002237 ,
L0002238 , L0002239 , L0002240 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs

L0002241 , L0002242 , L0002243 , L0002244 , L0002245 ,
L0002246 , L0002247 , L0002248 ,

L0002249 , L0002250 , L0002251 , L0002252 , L0002253 ,
L0002254 , L0002255 , L0002256 ,

L0002257 , L0002258 , L0002259 , L0002260 , L0002261 ,
L0002262 , L0002263 , L0002264 ,

L0002265 , L0002266 , L0002267 , L0002268 , L0002269 ,
L0002270 , L0002271 , L0002272 ,

L0002273 , L0002274 , L0002275 , L0002276 , L0002277 ,
L0002278 , L0002279 , L0002280 ,

L0002281 , L0002282 , L0002283 , L0002284 , L0002285 ,
L0002286 , L0002287 , L0002288 ,

L0002289 , L0002290 , L0002291 , L0002292 , L0002293 ,
L0002294 , L0002295 , L0002296 ,

L0002297 , L0002298 , L0002299 , L0002300 , L0002301 ,
L0002302 , L0002303 , L0002304 ,

L0002305 , L0002306 ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(460630.2, 3773063.9, 388.3, 388.3, 0.0); (460645.2, 3773063.9, 387.7, 387.7, 0.0);
(460660.2, 3773063.9, 386.9, 386.9, 0.0); (460675.2, 3773063.9, 385.8, 385.8, 0.0);
(460690.2, 3773063.9, 385.2, 385.2, 0.0); (460630.2, 3773078.9, 388.7, 388.7, 0.0);
(460645.2, 3773078.9, 388.1, 388.1, 0.0); (460660.2, 3773078.9, 387.3, 387.3, 0.0);
(460675.2, 3773078.9, 386.1, 386.1, 0.0); (460690.2, 3773078.9, 385.5, 385.5, 0.0);
(460630.2, 3773093.9, 389.1, 389.1, 0.0); (460645.2, 3773093.9, 388.5, 388.5, 0.0);
(460660.2, 3773093.9, 387.7, 387.7, 0.0); (460675.2, 3773093.9, 386.5, 386.5, 0.0);
(460690.2, 3773093.9, 385.8, 385.8, 0.0); (460630.2, 3773108.9, 389.4, 389.4, 0.0);
(460645.2, 3773108.9, 388.9, 388.9, 0.0); (460660.2, 3773108.9, 388.3, 388.3, 0.0);
(460675.2, 3773108.9, 387.2, 387.2, 0.0); (460690.2, 3773108.9, 386.6, 386.6, 0.0);
(460630.2, 3773123.9, 389.7, 389.7, 0.0); (460645.2, 3773123.9, 389.4, 389.4, 0.0);
(460660.2, 3773123.9, 388.9, 388.9, 0.0); (460675.2, 3773123.9, 388.0, 388.0, 0.0);
(460690.2, 3773123.9, 387.4, 387.4, 0.0); (460630.2, 3773138.9, 390.0, 390.0, 0.0);
(460645.2, 3773138.9, 389.7, 389.7, 0.0); (460660.2, 3773138.9, 389.3, 389.3, 0.0);
(460675.2, 3773138.9, 388.8, 388.8, 0.0); (460690.2, 3773138.9, 388.3, 388.3, 0.0);
(460705.2, 3773138.9, 387.8, 387.8, 0.0); (460720.2, 3773138.9, 387.1, 387.1, 0.0);
(460630.2, 3773153.9, 390.2, 390.2, 0.0); (460645.2, 3773153.9, 390.0, 390.0, 0.0);
(460660.2, 3773153.9, 389.8, 389.8, 0.0); (460675.2, 3773153.9, 389.5, 389.5, 0.0);
(460690.2, 3773153.9, 389.2, 389.2, 0.0); (460705.2, 3773153.9, 388.8, 388.8, 0.0);
(460720.2, 3773153.9, 387.7, 387.7, 0.0); (460630.2,

3773168.9,   390.3,   390.3,   0.0);
     (460645.2, 3773168.9,   390.2,   390.2,   0.0);   (460660.2,
3773168.9,   390.0,   390.0,   0.0);
     (460675.2, 3773168.9,   389.9,   389.9,   0.0);   (460690.2,
3773168.9,   389.5,   389.5,   0.0);
     (460705.2, 3773168.9,   389.1,   389.1,   0.0);   (460720.2,
3773168.9,   388.1,   388.1,   0.0);

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                                (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

               NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.

                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
CATEGORIES ***
                                                       (METERS/SEC)

                                              1.54,   3.09,   5.14,   8.23,
10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: FONT_V9_ADJU\FONT_v9.SFC
Met Version: 16216
Profile file: FONT_V9_ADJU\FONT_v9.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 3102 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN

Year: 2011 Year: 2011

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
11	01	01	1	01	-18.5	0.194	-9.000	-9.000	-999.	204.	41.2	0.25	2.82	1.00	1.80	69.	9.1	276.4	5.5
11	01	01	1	02	-23.8	0.239	-9.000	-9.000	-999.	281.	63.0	0.25	2.82	1.00	2.20	52.	9.1	275.4	5.5
11	01	01	1	03	-18.5	0.194	-9.000	-9.000	-999.	205.	41.2	0.25	2.82	1.00	1.80	32.	9.1	275.4	5.5
11	01	01	1	04	-1.4	0.067	-9.000	-9.000	-999.	57.	18.3	0.25	2.82	1.00	0.40	27.	9.1	274.2	5.5
11	01	01	1	05	-18.6	0.194	-9.000	-9.000	-999.	204.	41.2	0.25	2.82	1.00	1.80	51.	9.1	274.2	5.5
11	01	01	1	06	-29.7	0.296	-9.000	-9.000	-999.	387.	96.6	0.25	2.82	1.00	2.70	53.	9.1	274.2	5.5
11	01	01	1	07	-24.0	0.239	-9.000	-9.000	-999.	282.	63.0	0.25	2.82	1.00	2.20	70.	9.1	274.2	5.5
11	01	01	1	08	-8.4	0.138	-9.000	-9.000	-999.	127.	27.3	0.25	2.82	0.54	1.30	72.	9.1	275.4	5.5
11	01	01	1	09	44.3	0.280	0.571	0.005	147.	356.	-43.5	0.25	2.82	0.32	2.20	67.	9.1	277.5	5.5
11	01	01	1	10	122.7	0.264	0.952	0.005	247.	326.	-13.2	0.25	2.82	0.25	1.80	83.	9.1	279.9	5.5
11	01	01	1	11	179.8	0.316	1.733	0.005	1017.	426.	-15.4	0.25	2.82						

0.22   2.20   58.   9.1 282.0   5.5
 11 01 01   1 12 206.0 0.320 1.940 0.008 1244. 435.   -14.0 0.25   2.82
0.21   2.20 115.   9.1 283.1   5.5
 11 01 01   1 13 132.6 0.214 1.733 0.009 1377. 243.   -6.5 0.25   2.82
0.21   1.30 147.   9.1 284.2   5.5
 11 01 01   1 14 147.0 0.216 1.818 0.009 1431. 242.   -6.0 0.25   2.82
0.23   1.30 219.   9.1 284.9   5.5
 11 01 01   1 15 104.0 0.208 1.633 0.009 1468. 228.   -7.6 0.25   2.82
0.26   1.30 126.   9.1 285.4   5.5
 11 01 01   1 16   26.4 0.140 1.037 0.009 1477. 127.   -9.1 0.25   2.82
0.35   0.90 151.   9.1 284.9   5.5
 11 01 01   1 17   -9.0 0.137 -9.000 -9.000 -999. 121.   24.9 0.25   2.82
0.63   1.30   69.   9.1 283.1   5.5
 11 01 01   1 18 -33.4 0.342 -9.000 -9.000 -999. 481.   129.0 0.25   2.82
1.00   3.10   81.   9.1 281.4   5.5
 11 01 01   1 19 -33.6 0.342 -9.000 -9.000 -999. 481.   128.9 0.25   2.82
1.00   3.10   51.   9.1 279.9   5.5
 11 01 01   1 20 -23.6 0.239 -9.000 -9.000 -999. 287.   63.1 0.25   2.82
1.00   2.20   77.   9.1 278.8   5.5
 11 01 01   1 21 -18.5 0.194 -9.000 -9.000 -999. 205.   41.2 0.25   2.82
1.00   1.80   53.   9.1 277.5   5.5
 11 01 01   1 22 -23.7 0.239 -9.000 -9.000 -999. 281.   63.0 0.25   2.82
1.00   2.20   58.   9.1 277.5   5.5
 11 01 01   1 23 -18.5 0.194 -9.000 -9.000 -999. 205.   41.2 0.25   2.82
1.00   1.80   64.   9.1 277.5   5.5
 11 01 01   1 24   -4.5 0.094 -9.000 -9.000 -999.   74.   16.3 0.25   2.82
1.00   0.90   52.   9.1 277.0   5.5

 First hour of profile data
 YR MO DY HR HEIGHT F WDIR   WSPD AMB_TMP sigmaA sigmaW sigmaV
 11 01 01 01   5.5 0 -999. -99.00   276.5   99.0 -99.00 -99.00
 11 01 01 01   9.1 1   69.   1.80 -999.0   99.0 -99.00 -99.00

 F indicates top of profile (=1) or below (=0)

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   *** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   5 YEARS FOR SOURCE GROUP: ALL   ***
                                INCLUDING SOURCE(S):   L0000001   , L0000002   , L0000003   , L0000004   , L0000005   ,
                  L0000006   , L0000007   , L0000008   , L0000009   , L0000010

, L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018
, L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026
, L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
460630.18	3773063.94	0.00919	460645.18	3773063.94	0.00885
460660.18	3773063.94	0.00936	460675.18	3773063.94	0.00950
460690.18	3773063.94	0.00954	460630.18	3773078.94	0.00874
460645.18	3773078.94	0.00846	460660.18	3773078.94	0.00857
460675.18	3773078.94	0.00904	460690.18	3773078.94	0.00906
460630.18	3773093.94	0.00831	460645.18	3773093.94	0.00837
460660.18	3773093.94	0.00806	460675.18	3773093.94	0.00858
460690.18	3773093.94	0.00864	460630.18	3773108.94	0.00792
460645.18	3773108.94	0.00798	460660.18	3773108.94	0.00798
460675.18	3773108.94	0.00790	460690.18	3773108.94	0.00822
460630.18	3773123.94	0.00755	460645.18	3773123.94	0.00761
460660.18	3773123.94	0.00766	460675.18	3773123.94	0.00742
460690.18	3773123.94	0.00748	460630.18	3773138.94	0.00723
460645.18	3773138.94	0.00727	460660.18	3773138.94	0.00732
460675.18	3773138.94	0.00737	460690.18	3773138.94	0.00736
460705.18	3773138.94	0.00714	460720.18	3773138.94	0.00735

460630.18 3773153.94 0.00693 460645.18 3773153.94 0.00696
460660.18 3773153.94 0.00699 460675.18 3773153.94 0.00703
460690.18 3773153.94 0.00707 460705.18 3773153.94 0.00710
460720.18 3773153.94 0.00688 460630.18 3773168.94 0.00665
460645.18 3773168.94 0.00668 460660.18 3773168.94 0.00670
460675.18 3773168.94 0.00673 460690.18 3773168.94 0.00677
460705.18 3773168.94 0.00681 460720.18 3773168.94 0.00665

*** AERMOD - VERSION 19191 *** *** C:\Lakes\AERMOD View\Palmetto Replacement Site\Palmetto Replacement *** 05/08/20
*** AERMET - VERSION 16216 *** *** 18:21:03

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 ,
L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 ,
L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 ,
L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460630.18	3773063.94	0.02580	(15031421)	460645.18	3773063.94	0.02633	(15031421)
460660.18	3773063.94	0.02542	(12101602)	460675.18	3773063.94	0.02505	(13071606)
460690.18	3773063.94	0.02510	(13071606)	460630.18			

```
3773078.94        0.02514  (12091322)
        460645.18   3773078.94        0.02545  (15031421)                460660.18
3773078.94        0.02381  (13071606)
        460675.18   3773078.94        0.02388  (13071606)                460690.18
3773078.94        0.02392  (13071606)
        460630.18   3773093.94        0.02455  (12091322)                460645.18
3773093.94        0.02406  (15031421)
        460660.18   3773093.94        0.02446  (15031421)                460675.18
3773093.94        0.02333  (12101602)
        460690.18   3773093.94        0.02285  (13071606)                460630.18
3773108.94        0.02395  (12091322)
        460645.18   3773108.94        0.02355  (12091322)                460660.18
3773108.94        0.02325  (15031421)
        460675.18   3773108.94        0.02242  (11082205)                460690.18
3773108.94        0.02288  (12101602)
        460630.18   3773123.94        0.02333  (12091322)                460645.18
3773123.94        0.02308  (12091322)
        460660.18   3773123.94        0.02270  (12091322)                460675.18
3773123.94        0.02294  (15031421)
        460690.18   3773123.94        0.02162  (15031421)                460630.18
3773138.94        0.02265  (12091322)
        460645.18   3773138.94        0.02248  (12091322)                460660.18
3773138.94        0.02226  (12091322)
        460675.18   3773138.94        0.02195  (15031421)                460690.18
3773138.94        0.02181  (15031421)
        460705.18   3773138.94        0.02217  (15031421)                460720.18
3773138.94        0.02191  (15031421)
        460630.18   3773153.94        0.02201  (12070903)                460645.18
3773153.94        0.02191  (12070903)
        460660.18   3773153.94        0.02180  (12070903)                460675.18
3773153.94        0.02166  (12070903)
        460690.18   3773153.94        0.02147  (15031421)                460705.18
3773153.94        0.02130  (15031421)
        460720.18   3773153.94        0.02144  (15031421)                460630.18
3773168.94        0.02145  (12112420)
        460645.18   3773168.94        0.02141  (12112420)                460660.18
3773168.94        0.02134  (12112420)
        460675.18   3773168.94        0.02126  (12112420)                460690.18
3773168.94        0.02108  (12112420)
        460705.18   3773168.94        0.02081  (15031421)                460720.18
3773168.94        0.02086  (15031421)
 *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

                                  PAGE  95
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
460630.18	3773063.94	0.01607m	(13112024)	460645.18	3773063.94	0.01515m	(13112024)
460660.18	3773063.94	0.01590m	(13112024)	460675.18	3773063.94	0.01597m	(13112024)
460690.18	3773063.94	0.01602m	(13112024)	460630.18	3773078.94	0.01536m	(13112024)
460645.18	3773078.94	0.01460m	(13112024)	460660.18	3773078.94	0.01469m	(13112024)
460675.18	3773078.94	0.01525m	(13112024)	460690.18	3773078.94	0.01524m	(13112024)
460630.18	3773093.94	0.01467m	(13112024)	460645.18	3773093.94	0.01471m	(13112024)
460660.18	3773093.94	0.01389m	(13112024)	460675.18	3773093.94	0.01456m	(13112024)
460690.18	3773093.94	0.01457m	(13112024)	460630.18	3773108.94	0.01401m	(13112024)
460645.18	3773108.94	0.01407m	(13112024)	460660.18	3773108.94	0.01400m	(13112024)
460675.18	3773108.94	0.01364m	(13112024)	460690.18	3773108.94	0.01398m	(13112024)
460630.18	3773123.94	0.01341m	(13112024)	460645.18	3773123.94	0.01347m	(13112024)
460660.18	3773123.94	0.01352m	(13112024)	460675.18	3773123.94	0.01291m	(13112024)
460690.18	3773123.94	0.01291m	(13112024)	460630.18	3773138.94	0.01285m	(13112024)

460645.18 3773138.94 0.01290m (13112024) 460660.18
3773138.94 0.01296m (13112024)
460675.18 3773138.94 0.01301m (13112024) 460690.18
3773138.94 0.01295m (13112024)
460705.18 3773138.94 0.01240m (13112024) 460720.18
3773138.94 0.01268m (13112024)
460630.18 3773153.94 0.01234m (13112024) 460645.18
3773153.94 0.01238m (13112024)
460660.18 3773153.94 0.01242m (13112024) 460675.18
3773153.94 0.01247m (13112024)
460690.18 3773153.94 0.01252m (13112024) 460705.18
3773153.94 0.01255m (13112024)
460720.18 3773153.94 0.01195m (13112024) 460630.18
3773168.94 0.01186m (13112024)
460645.18 3773168.94 0.01189m (13112024) 460660.18
3773168.94 0.01193m (13112024)
460675.18 3773168.94 0.01197m (13112024) 460690.18
3773168.94 0.01202m (13112024)
460705.18 3773168.94 0.01207m (13112024) 460720.18
3773168.94 0.01165m (13112024)

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00954 AT (460690.18, 3773063.94, 385.19, 385.19, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.00950 AT (460675.18, 3773063.94, 385.75, 385.75, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.00936 AT (460660.18, 3773063.94, 386.94, 386.94, 0.00)	DC	

```
         4TH HIGHEST VALUE IS       0.00919 AT (  460630.18,  3773063.94,   388.31,
  388.31,    0.00)  DC
         5TH HIGHEST VALUE IS       0.00906 AT (  460690.18,  3773078.94,   385.48,
  385.48,    0.00)  DC
         6TH HIGHEST VALUE IS       0.00904 AT (  460675.18,  3773078.94,   386.11,
  386.11,    0.00)  DC
         7TH HIGHEST VALUE IS       0.00885 AT (  460645.18,  3773063.94,   387.71,
  387.71,    0.00)  DC
         8TH HIGHEST VALUE IS       0.00874 AT (  460630.18,  3773078.94,   388.69,
  388.69,    0.00)  DC
         9TH HIGHEST VALUE IS       0.00864 AT (  460690.18,  3773093.94,   385.78,
  385.78,    0.00)  DC
        10TH HIGHEST VALUE IS       0.00858 AT (  460675.18,  3773093.94,   386.46,
  386.46,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♠ *** AERMOD - VERSION  19191 ***   *** C:\Lakes\AERMOD View\Palmetto Replacement
Site\Palmetto Replacement  ***        05/08/20
 *** AERMET - VERSION  16216 ***   ***
                       ***        18:21:03

                                   PAGE  97
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
             **

                                                      DATE
                                          NETWORK
GROUP ID                             AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.02633  ON 15031421: AT (  460645.18,
3773063.94,   387.71,   387.71,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
```

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK OF TYPE GRID-ID	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)
ALL	HIGH 1ST HIGH VALUE IS	0.01607m ON 13112024:	AT (	460630.18, 3773063.94, 388.31, 388.31, 0.00) DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 7 Warning Message(s)
A Total of 838 Informational Message(s)

```
 A Total of        43848 Hours Were Processed

 A Total of           40 Calm Hours Identified

 A Total of          798 Missing Hours Identified (  1.82 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    4691       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187    4691       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 MX W438    8800        METQA: Convective Velocity Data Out-of-Range.  KURDAT =
 12010216
 MX W438   11536        METQA: Convective Velocity Data Out-of-Range.  KURDAT =
 12042516
 MX W420   16779        METQA: Wind Speed Out-of-Range.   KURDAT =
 12113003
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
 15010101
 MX W450   26305       CHKDAT: Record Out of Sequence in Meteorological File at:
1 year gap

    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

Appendix C

Biological Resources Assessment; and

Biological Screening Memo for Replacement Sites

47 1st Street, Suite 1
Redlands, CA 92373-4601
(909) 915-5900

July 24, 2019

Kari Cano
Kimley-Horn
3880 Lemon Street, Suite 420
Riverside, CA 92501

RE: Biological Resources Assessment and Jurisdictional Delineation
Casa Grande EIR- Southeast corner of Sierra Avenue and Casa Grande Avenue
City of Fontana, CA

Dear Kari:

Jericho Systems, Inc. (Jericho) is pleased to provide this letter report that details the results of a general Biological Resources Assessment (BRA) that includes habitat suitability assessments for nesting birds, Burrowing owl (*Athene cunicularia*) [BUOW], California gnatcatcher (*Polioptila californica*) [CAGN], raptors, small mammals such as the San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*) [SBKR] and Los Angeles Pocket mouse (*Perognathus longimembris brevinasus*) [LAPM] and a Jurisdictional Waters Delineation (JD) for the proposed parcels in the northwest corner of the intersection of Casa Grande Drive and Sierra Avenue in the city of Fontana, CA.

This report is designed to address potential effects of any development to designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), or species designated as sensitive by the California Department of Fish and Wildlife (CDFW), or the California Native Plant Society (CNPS). Attention was focused sensitive species known to occur locally. This report also addresses resources protected under the Migratory Bird Treaty Act, federal Clean Water Act (CWA) regulated by the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) respectively; and Section 1602 of the California Fish and Game Code (FCG) administered by the CDFW.

SITE LOCATION

The Project site is in northeastern Fontana, in San Bernardino County, approximately 1.3-miles north of the Foothill (SR-210) Freeway and approximately 1.3 miles southeast of the Ontario (I-15) Freeway. Approximately 300 feet to the east is the adjoining City of Rialto. The Project site is a vacant and unimproved rectangular-shaped site on the east side of Sierra Avenue, immediately north of the future westerly projection of West Casa Grande Drive. On the east end of the parcel, an access road exists to service maintenance for existing active power lines.

ENVIRONMENTAL SETTING

The site is rectangular shape of vacant and unimproved land on approximately 17-acres (APNs: 0239-151-22, 34 & 40). The site's irregular shape is the result of it being bounded by a Southern California Edison (SCE) high voltage transmission corridor that runs north-south, parallel to, but east of Sierra Avenue, before angling across Sierra Avenue and continuing west. The site and the contiguous properties are undeveloped; however, there is a residential area to the northeast and commercial properties to the south and east.

The surrounding local area sits at the base of the Cajon Pass, where high winds are common meteorological events within the region. The local is characterized as Mediterranean an average annual rainfall of approximately 17 inches. Hydrologically, the Project site is within the Colton Hydrologic Sub-Area (HSA 801.44) which comprises a 17,765-acre drainage area within the larger Middle Santa Ana River Watershed (HUC 180702030804). The subject parcel is situated in a developing area of the Inland Valleys ecoregion.

METHODS

As stated above, the objective of this document is to determine whether the Project area supports special status or otherwise sensitive species and/ or their habitat, and to address the potential effects associated with the Proposed project on those resources. The species and habitats addressed in this document are based on database information and field investigation.

Prior to conducting the field study, species and habitat information was gathered from the reports related to the specific project and relevant databases for the *Devore* USGS quadrangle to determine which species and/or habitats would be expected to occur on site. These sources include:

- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USFWS Information for Planning and Consultation System (IPaC);
- California Natural Diversity Database (CNDDB) *Rarefind 5*;
- CNDDB Biogeographic Information and Observation System (BIOS);
- California Native Plant Society Electronic Inventory (CNPSEI) database;
- Calflora Database;
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers
- USFWS Designated Critical Habitat Maps

We also reviewed other available technical information on the biological resources of the site, including previous trapping surveys and discussed recent findings with researchers in the field.

Jericho biologist Christian Nordal conducted a general biological resources assessment on July 11, 2019, with an emphasis on special-status species known to occur in the area. Mr. Nordal has advanced degrees and multiple years of experience surveying biological resources within Southern California. Mr. Nordal conducted the systematic and comprehensive survey during calm weather, between the hours of 6 a.m. and 7:30 a.m. Weather conditions during the survey consisted of clear skies with temperatures ranging from 70 degrees Fahrenheit (° F) to 80° F and no wind.

On July 13, 2019, Jericho ecologist Shay Lawrey performed a site assessment to evaluate the potential to for sensitive birds and small mammals to occur on site, specifically the federally endangered SBKR and

State species of special concern LAPM and federally threatened CAGN. Ms. Lawrey has advanced degrees in biology, is permitted to trap and handle SBKR and has two decades of experience with surveying for sensitive small mammals and birds.

Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other sign. In addition to species observed, expected wildlife usage of the site was determined per known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species surveys was to identify potential habitat for special status wildlife within the project area. Disturbance characteristics and all animal sign encountered on the site are recorded in the results section.

The site was also evaluated for the presence of jurisdictional waters, i.e. waters of the U.S. as regulated by the USACE and RWQCB, and/or streambed and associated riparian habitat as regulated by the CDFW. Evaluation of potential federal jurisdiction followed the regulations set forth in 33CFR part 328 and the USACE guidance documents and evaluation of potential State jurisdiction followed guidance in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds (CDFW, 2010).

RESULTS

The database searches identified 32 sensitive species (12 plant, 19 animal, 1 invertebrate) and 3 sensitive habitats within the *Devore* USGS 7.5-minute series quadrangle (Attachment B: Figure 4 and Figure 5). A full summary of these results is outlined in Attachment A. The database searches indicated the presence of State- and/or federally listed threatened or endangered species in the immediate vicinity of the project site and USFWS-designated Critical Habitat for SBKR on the Project site.

Habitat on site consists of coastal sage scrub and chamise chaparral mixed with dense non-native grasses and native annuals and perennials. Native species on site include California buckwheat (*Eriogonum fasciculatum),* chamise (*Adenostoma fasciculatum*), deerweed (*Lotus scoparius*), *Lupinus bicolor, Phacelia distans, Heterotheca grandiflora, Cryptantha intermedia*, *Camissoniopsis bistorta,* and *Amsinckia menziesii*. The non-native vegetation present within the project area consists (e.g. red brome *Bromus rubens,* ripgut brome *Bromus diandrus*), wild oat (*Avena barbata*) with redstem filaree (*Erodium cicutarium*) and mustard (*Barssica incana*).

Wildlife species observed or otherwise detected on site during the surveys included: mourning dove, black phoebe (*Sayornis nigricans*), lesser goldfinch (*Spinus psaltria*), California towhee (*Melozone fusca*), spotted towhee (*Pipilo maculatus*), house finch (*Haemorhous mexicanus*), Say's phoebe (*Sayornis saya*), western kingbird (*Tyrannus melancholicus*), Cassin's kingbird (*Tyrannus vociferans*), northern mockingbird (*Mimus polyglottos*), and coyote (*Canis latrans*). Small mammal burrows were found throughout the site.

Due to the dense grass load on the Project site, there is a low potential for occurrence of BUOW. This species is not typically associated with dense habitat structure including dense grasses, such as are the conditions found on site. The Project site however, is potentially suitable for CAGN, SBKR and LAPM.

San Bernardino Kangaroo Rat (SBKR)

The SBKR is one of several kangaroo rat species in its range. The Dulzura kangaroo rat (*Dipodomys simulans*), the Pacific kangaroo rat (*D. agilis*) and the Stephens kangaroo rat (*D. stephensi*) can occur in areas occupied by the SBKR, but these other species have a wider habitat range.

The habitat of the SBKR is confined to primary and secondary alluvial fan scrub habitats, with sandy soils deposited by fluvial (water) rather than aeolian (wind) processes. Burrows are dug in loose soil, usually near or beneath shrubs. SBKR, are confined to inland valley scrub communities, and more particularly, to scrub communities occurring along rivers, streams and drainage. Most of these drainages have been historically altered as a result of flood control efforts and the resulting increased use of river resources, including mining, off-road vehicle uses and road and housing development. This increased use of river resources has resulted in a reduction in both the amount and quality of habitat available for the SBKR. The past habitat losses and potential future losses prompted the emergency listing of the SBKR as an endangered species.

In general, the Project site contains the habitat elements typically associated with SBKR, but the understory is choked with non-native grasses. The grass component onsite site makes it less suitable for SBKR, but the site is considered potentially suitable for SBKR. Further, there are several documented occurrences of SBKR in the immediate vicinity of the Project site and Critical Habitat for SBKR is mapped on the Project site. For these reasons' absence cannot be determined without a focused presence/absence survey..

Los Angeles Pocket Mouse (LAPM)

The LAPM is one of two pocket mice found in this area of San Bernardino County. Both the LAPM and the San Diego pocket mouse occupy similar habitats, but the San Diego pocket mouse has a wider range extending south into San Diego County. The habitat of the LAPM is confined to lower elevation grasslands and coast sage scrub habitats, in areas with soils composed of fine sands. The present known distribution of this species extends from Rancho Cucamonga east to Morongo and south to the San Diego County border. LAPM forages in open ground and underneath shrubs. Pocket mice in general dig burrows in loose soil, although this has not been completely documented for this subspecies. The LAPM is listed as a Critical Species of Concern by the CDFW.

The Project site contains marginally suitable habitat for LAPM and there are several documented occurrences of LAPM to the north and south of the Project site. No protocol surveys were conducted as part of this assessment, therefore presence or absence of LAPM was not determined, only their potential to occur. Potential of occurrence for LAPM is moderate. Presence or absence of LAPM cannot be presumed without a focused presence/absence survey..

California gnatcatcher(CAGN)

CAGN is a federally listed Threatened Species year-round residents of the CSS vegetative community in southern California. It is a small thrush-like songbird approximately 4 to 5 inches in length with dark, blue-gray plumage above and gray-white plumage below. Nest building begins during the second or third week of March. The range and distribution of the CAGN is closely aligned with coastal scrub vegetation. This vegetation is typified by low 3 feet, shrub and sub-shrub species that are often drought deciduous. The coastal scrub plant communities that overlap the range of the gnatcatcher include Venturan, Diegan, and Riversidean coastal sage scrub communities, and Martirian and Vizcainan coastal succulent scrub communities. The density of CAGN is highest in high-quality habitat and decreased as habitat quality decreased.

As late as the mid-1940s the CAGN was considered locally common and by the mid-1960s, a noticeable decline had begun. The CAGN was listed as Threatened in 1992. According to the "Final Critical Habitat mapping Unit #12" for San Bernardino County, this site is not located within designated critical habitat for the CAGN.

The site contains habitat potentially suitable for CAGN and absence cannot be determined without survey.

Burrowing owl (BUOW)

BUOW are known to occur locally within suitable habitat areas. BUOW is a ground-dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW depends on the presence of mammal burrows, i.e. ground squirrel burrows to provide shelter from predators, inclement weather and to provide a nesting place. They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. They feed primarily on insects but will also take small rodents, birds, and reptiles. They are active during the day and night, generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31. The BUOW is not listed under the State or Federal Endangered Species Act but is considered both a State and federal SSC. The BUOW is a protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5).

Per the definition provided in the *2012 CDFG Staff Report on Burrowing Owl Mitigation*, "Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey." Therefore, the project site and immediate vicinity does not contain suitable habitat for this species for the following reasons:

- *Vegetation is not sparse or low to the ground*
- *Burrows on site are small mammal burrows that are not of the appropriate size shape or aspect for BUOW. No ground squirrel burrows were present.*
- *Presence of predators (coyote)*

No evidence of BUOW was found in the survey area. No burrows of appropriate shape size or aspect for BUOW or BUOW pellets, feathers or whitewash were found on site. No BUOW individuals were observed. Therefore, BUOW are considered absent from the site at the time of surveys.

Nesting Birds and Raptors

The site is suitable for use by raptors for foraging purposes. The project site and immediate surrounding areas do contain habitat suitable for nesting birds in general, including the shrubs on site.

Nesting birds are protected under the MBTA which provides protection for nesting birds that are both residents and migrants whether they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Jurisdiction Waters

There are no drainages on site. No aspect of the site presents any evidence of jurisdictional waters. None of the following indicators are present on site: riparian vegetation, facultative, facultative wet or obligate wet vegetation, harrow marks, sand bars shaped by water, racking, rilling, destruction of vegetation, defined bed and bank, distinct line between vegetation types, clear natural scour line, meander bars, mud cracks, staining, silt deposits, litter- organic debris. No jurisdictional waters occur on site.

CONCLUSIONS AND RECOMMENDATIONS

BUOW

There is very low potential for BUOW due to the lack of suitable habitat. Further investigation is not recommended or warranted.

CAGN

Habitat conditions on site are potentially suitable for CAGN. Here presence or absence cannot determine without focused survey. Prior to ground disturbing activities, focused protocol surveys for CAGN shall be conducted for by a qualified biologist presence/absence.

Surveys for CAGN will follow USFWS protocol by permitted biologists. The protocol should be followed for all surveys unless otherwise authorized by the USFWS writing. The permittee shall notify the USFWS in writing, at least ten (10) working days prior to the anticipated start date of survey work and receive approval prior to beginning work. The permittee shall provide a report to the USFWS within 45 days following the field surveys.

For breeding season:

From March 15 through June 30, a minimum of six (6) surveys shall be conducted at least one week apart. The protocol for the breeding season was designed to provide a 95% confidence level of detecting CAGN at a site when they are present.

For nonbreeding season:

From July 1 through March 14, a minimum of nine (9) surveys shall be conducted at least two weeks apart. Prevailing site conditions and professional judgment must be applied to determine appropriate survey rates and acreage covered per day. These factors may dictate that the maximum daily coverage specified below is not prudent under certain conditions. No more than 80 acres (32 ha) shall be surveyed per biologist per day.

SBKR/LAPM

The Project site is mapped in Critical Habitat for SBKR and several occurrences of SBKR are documented in the immediate vicinity of the Project site. Habitat conditions on site are marginal but suitable for SBKR. Presence or absence can only be by focused survey.

Habitat conditions on site are also potentially suitable for LAPM and presence or absence cannot determine without focused survey.

Prior to ground disturbing activities, focused small mammal surveys shall be conducted for by a qualified biologist.

Surveys for SBKR/LAPM will follow USFWS protocol for live mammal trapping by permitted biologists. Live trapping will be conducted over five (5) consecutive nights if no target species are captured. Trapping shall be terminated if a target species is trapped prior to the fifth night. Trapping will be conducted under mild weather conditions, with a minimum temperatures greater than 50° Fahrenheit and atmospheric conditions relatively dry, and calm. Trapping shall not be conducted in extended periods of wind, rain or fog that may jeopardize the lives of the target species. Following the survey, the biologist shall submit all a report and associated information required by their USFWS federal Section 10(a) permit.

If none of these species are found during surveys, no further action would be required.

However, if LAPM, SBKR and/or CAGN are found during these surveys, the following mitigation would apply according to the federal Endangered Species Act, California Fish and Game Code and City of Fontana's North Fontana Conservation Program requirements:

> Both the CAGN and SBKR are federally listed species and incidental take permits would be required from the USFWS. Occupied portions of the site would not be able to be developed until the appropriate "take" authority is acquired from the USFWS. According to the North Fontana Conservation Program, areas occupied by either SBKR or CAGN, shall be mitigated at a 5:1 ratio (i.e., an applicant will pay five times the per acre mitigation fee for developing the project site or portion of the property). At this time, costs per acre for occupied habitat have not been determined. The determined fee however, for suitable habitat is $6,210.00 per acre. Therefore, $6,210.00 per acre would be the benchmark costs per/acre to mitigate for GAGN and/or SBKR.
>
> LAPM is a State Species of Special Concern and coordination with the CDFW would be required to determine the mitigation ratios under their jurisdictions. At a minimum, occupied habitat for LAPM would be mitigated at a 1:1 ratio in accordance with the fee structure set forth in the North Fontana Conservation Program.

Nesting Birds

The vegetation on site does have a potential to support nesting birds and foraging raptors such as red-tailed hawks. Therefore, to reduce the potential impacts to nesting birds, the following is recommended:

> Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required.
>
> If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Please do not hesitate to contact me at 909-915-5900 should you have any questions or require further information.

Sincerely,



Shay Lawrey, President
Ecologist/Regulatory Specialist

Attachments:

Attachment A – Table of Documented Occurrences
Attachment B – Figures
Attachment C – Site Photos

ATTACHMENT A – TABLE OF DOCUMENTED OCCURRENCES

Attachment A – Table of Database Queries (CNDDB, IPAC, CNPSEI)

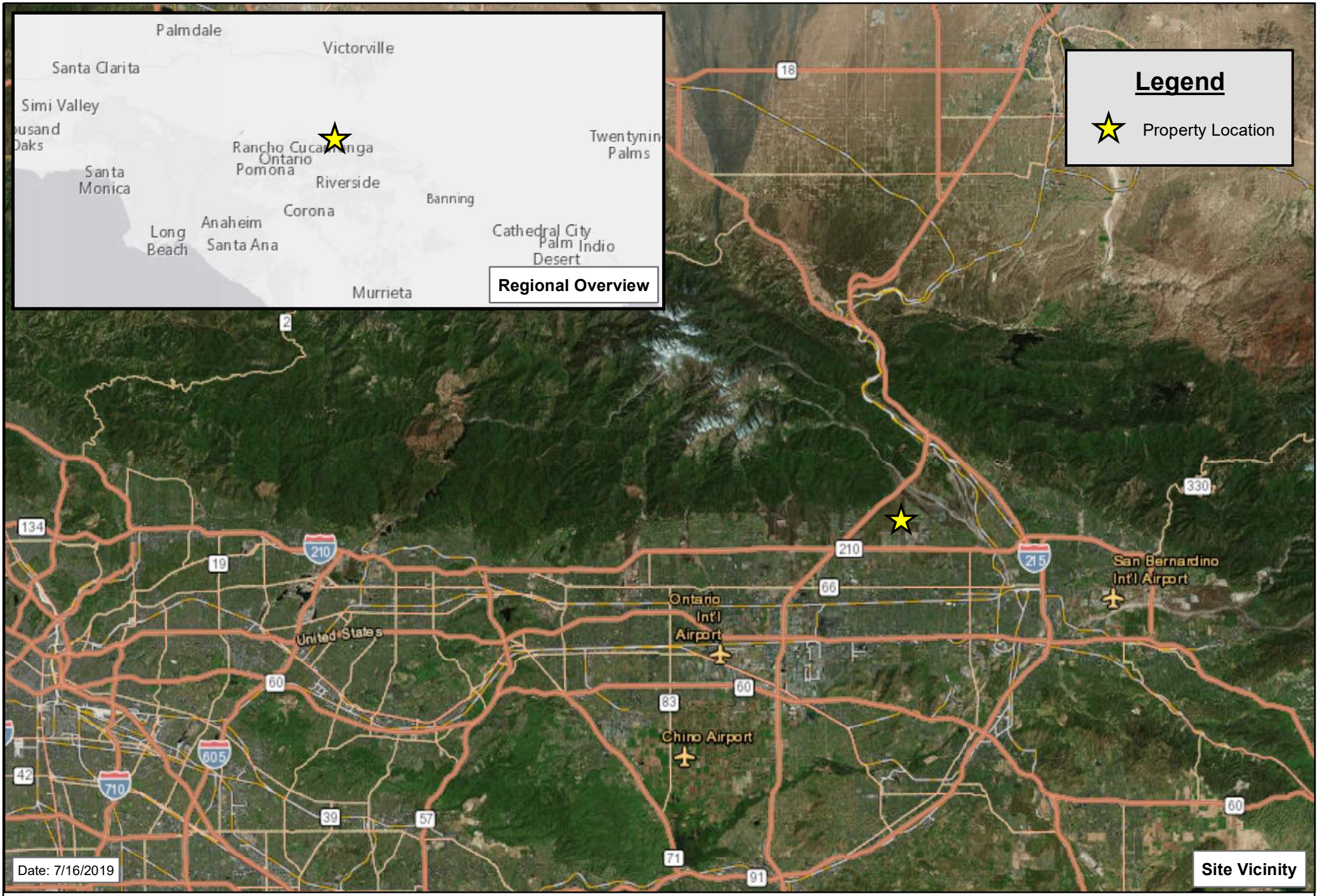
Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
Ambrosia monogyra	singlewhorl burrowbrush	Endangered/none	Chaparral, Sonoran desert scrub	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Anaxyrus californicus	arroyo toad	Endangered/Endangered	Sandy washes with terraces, quiet pools free from predators	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Anniella stebbinsi	southern California legless lizard	none/none	Coastal sand dunes, sandy washes, alluvial fans	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Arizona elegans occidentalis	California glossy snake	none/none	Arid scrub, rocky washes, grasslands, chaparral	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Artemisiospiza belli	Bell's sage sparrow	none/none	Sagebrush flats, alkaline flats with saltbush, semi-arid shrublands in the lowlands	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Athene cunicularia	burrowing owl	none/none	Open areas with little vegetation and existing burrows	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low..
Batrachoseps gabrieli	San Gabriel slender salamander	none/none	Rock piles/outcroppings near water	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Bombus crotchii	Crotch bumble bee	none/none	Grasslands and shrublands with abandoned small mammal burrows	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Calochortus plummerae	Plummer's mariposa lily	none/none	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland in granite/rocky soils	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
Chaetodipus fallax	northwestern San Diego pocket mouse	none/none	chaparral, grasslands, scrub forests and deserts; rarely found in cities. Requires low growing vegetation or rocky outcroppings and sandy soil for burrows.	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	none/none	Low-growing vegetation with rocky outcroppings and sandy soil	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Chorizanthe parryi var. *parryi*	Parry's spineflower	none/none	Chaparral, cismontane woodland, coastal scrub, valley foothill grassland	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	none/none	Coastal scrub (alluvial fans), Mojavean desert scrub, Pinyon and juniper woodland	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered/ none	Alluvial fan chaparral and sage scrub with sandy loam substrates.	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Dodecahema leptoceras	slender-horned spineflower	Endangered/ Endangered	Chaparral, cismontane woodland, coastal scrub (alluvial fan)	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Empidonax traillii extimus	Southwestern Willow Flycatcher	Endangered/Endangered	Riparian woodland with multiple canopy layers	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	Endangered/Endangered	Chaparral, Coastal scrub (alluvial fan)	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Gymnohyps californianus	California condor	Endangered/Endangered	Arid, remote areas in mountains with large, old growth trees for nesting	This species does not occur in San Bernardino County. The Project site is outside of the species range. Occurrence potential is none.
Horkelia cuneata var. *puberula*	mesa horkelia	none/none	Sandy or gravelly soils in chaparral, coastal scrub, or cismontane woodland	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
Lepus californicus bennettii	San Diego black-tailed jackrabbit	none/none	Variety of habitats with mixed grasses and shrub	Habitat on site is suitable. Species has potential to occur is high
lilium parryi	lemon lily	none/none	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Lycium parishii	Parish's desert-thorn	none/none	Creosote bush scrub	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Malacothamnus parishii	Parish's bush-mallow	none/none	Chaparral, coastal sage scrub	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Nyctinomops femorosaccus	pocketed free-tailed bat	none/none	Semi-arid habitats, roosting in mines, tunnels, caves, and rock crevices	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Opuntia basilaris var. *brachyclada*	short-joint beavertail	none/none	Chaparral, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland	Habitat on site is primarily invasive grasses. Potential to occur is low.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	none/none	Coastal sage scrub, chaparral	The shrub component and soils on site are potentially suitable for this species. Potential to occur is moderate.
Phrynosoma blainvillii	coast horned lizard	none/none	Open areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains	Habitat on site is primarily invasive grasses. Potential to occur is low.
Polioptila californica	coastal California gnatcatcher	Threatened/none	Sage scrub	The shrub component and on site is potentially suitable for this species. Potential to occur is moderate.
Rana muscosa	southern mountain yellow-legged frog	Endangered/Endangered	Rocky, high altitude streams	No habitat on site for this species. Potential to occur is none.
Rhinichthys osculus ssp. *3*	Santa Ana speckled dace	none/none	Variety of aquatic habitats	No habitat on site for this species. Potential to occur is none.
	Riversidian Alluvial Fan Sage Scrub	none/none		Present
	Southern Riparian Forest	none/none		Absent

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
	Southern Sycamore Alder Riparian Woodland	none/none		Absent
Streptanthus bernardinus	Laguna Mountains jewelflower	none/none	Coniferous forest and chaparral	Habitat on site is primarily invasive grasses. Potential to occur is low.
Vireo bellii pusillus	least Bell's vireo	Endangered/Endangered	Riparian scrub and riparian woodland	No habitat on site for this species. Potential to occur is none.

ATTACHMENT B
FIGURES

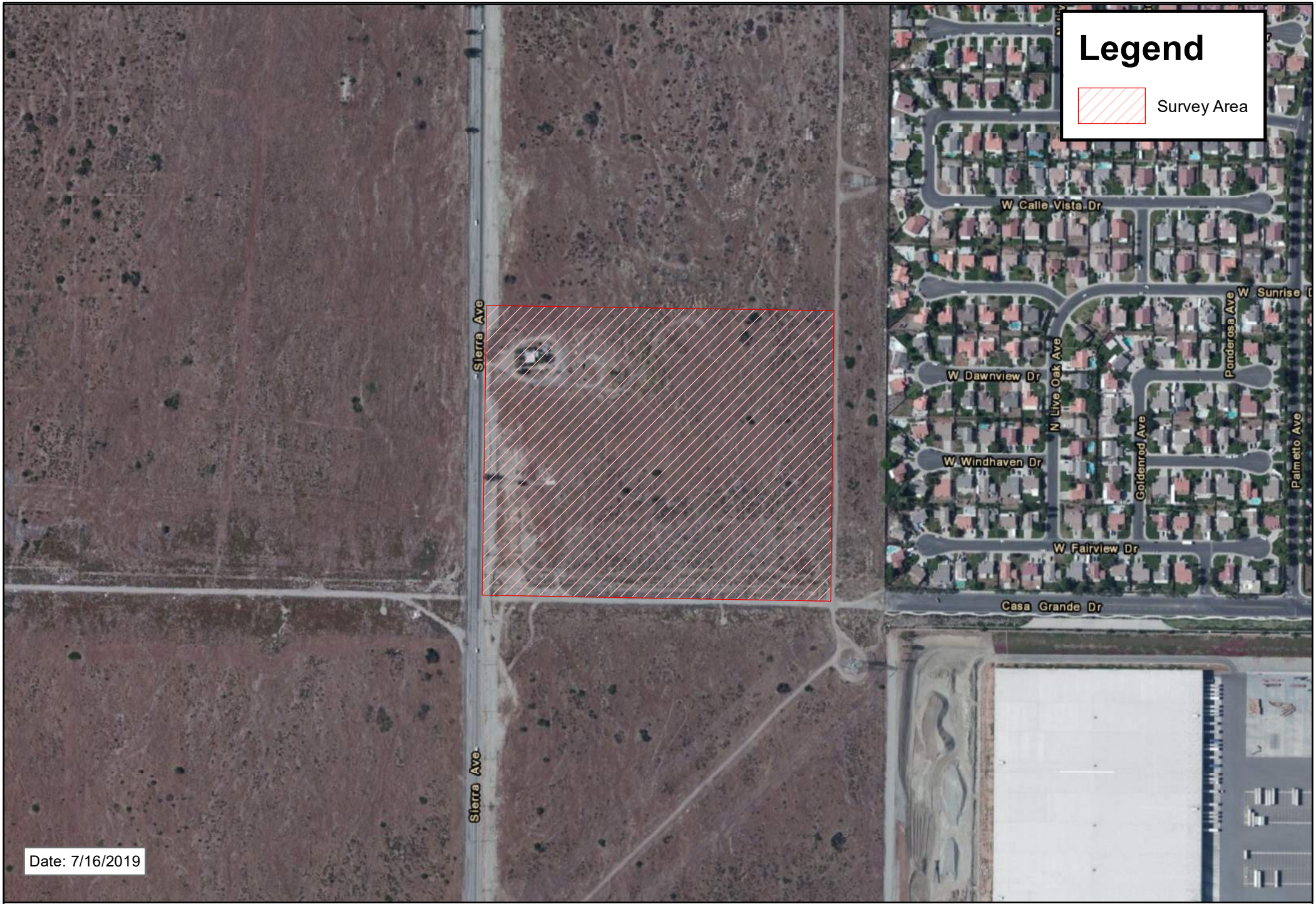


Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

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Figure 1 - Regional Overview
Site Vicinity

Casa Grande Dr./Sierra Ave.
Northeast Corner Parcels
Fontana, CA



0 0.0375 0.075 0.15 0.225 0.3 Miles

Imagery Date: 8/6/2017

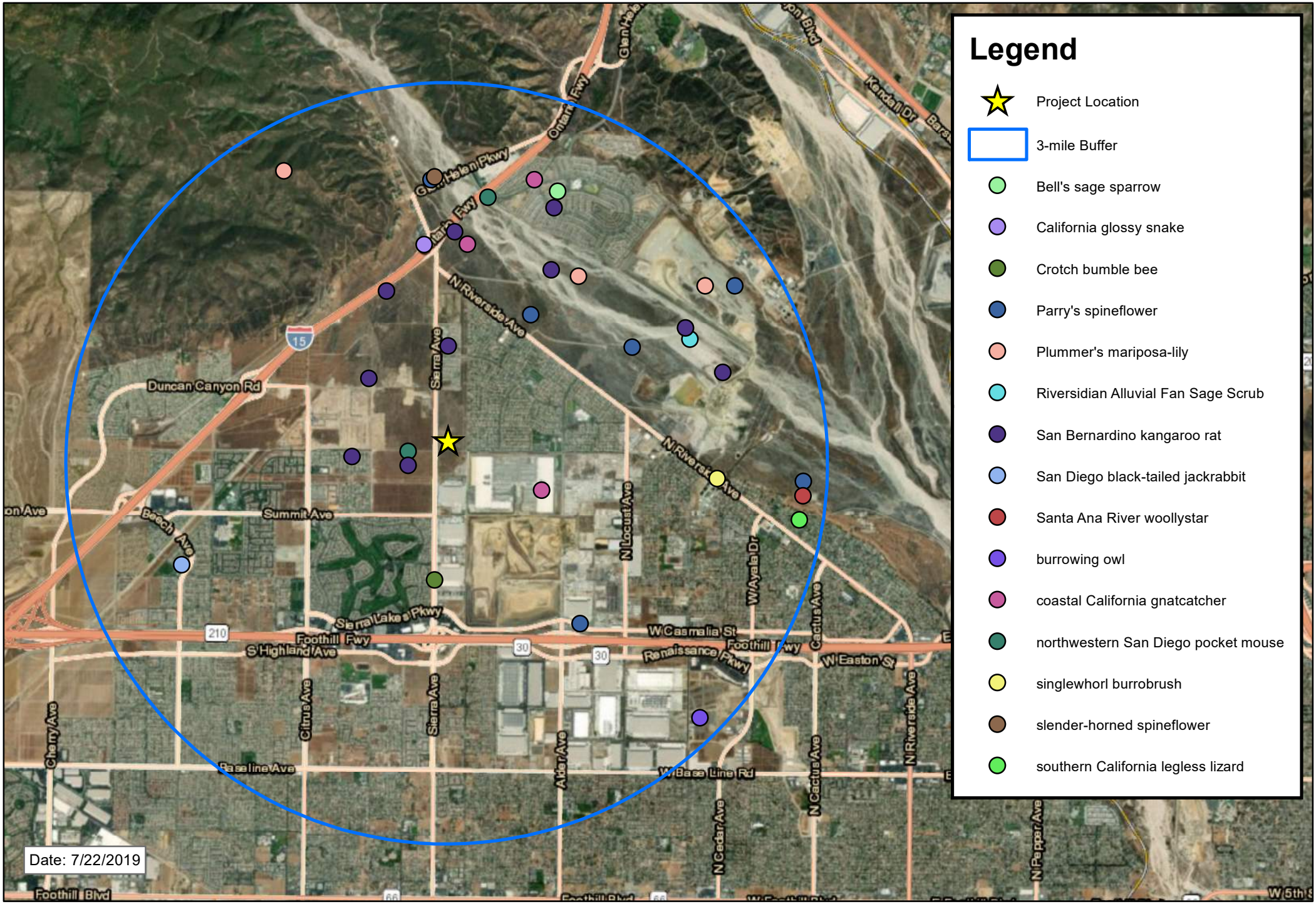
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 392 feet

Figure 2
Site Location

Casa Grande Dr./Sierra Ave.
Northeast Corner Parcels
Fontana, CA



0 0.475 0.95 1.9 2.85 3.8 Miles

Imagery Date: 8/6/2017

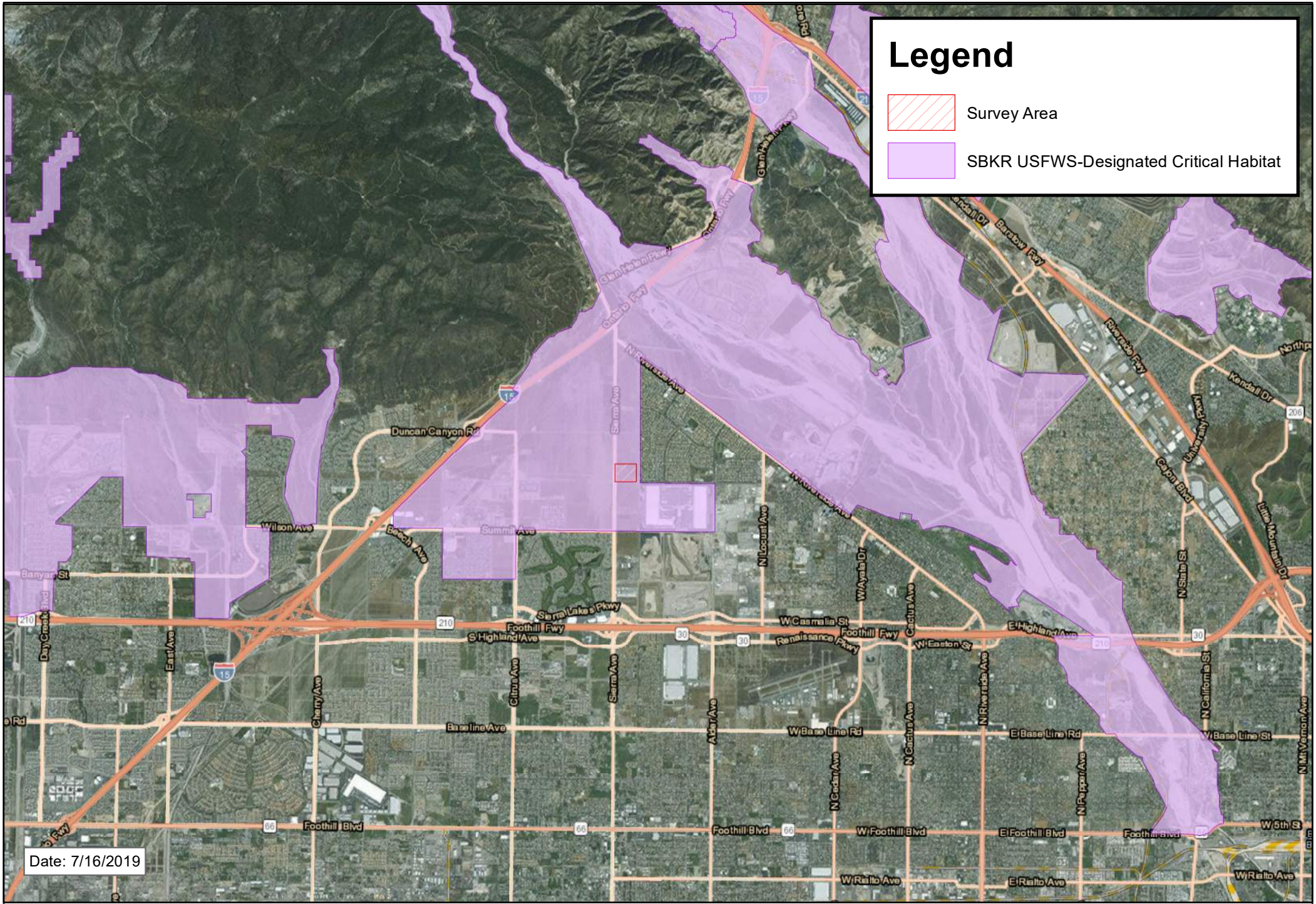
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 5,000 feet

Figure 3
3-mile Species Occurences

Casa Grande Dr./Sierra Ave.
Northeast Corner Parcels
Fontana, CA



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Figure 4
SBKR Critical Habitat

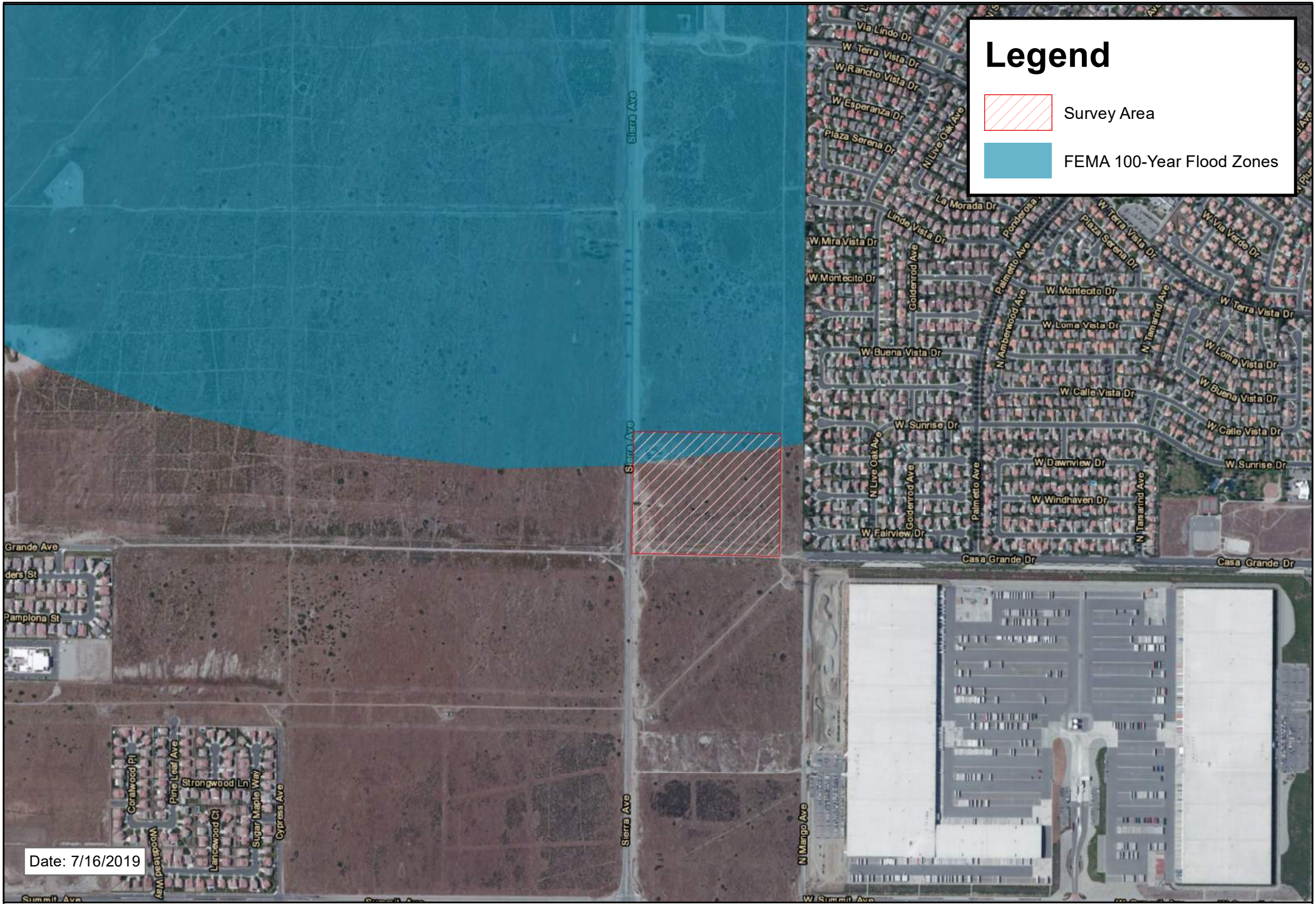
Casa Grande Dr./Sierra Ave.
Northeast Corner Parcels
Fontana, CA



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Figure 5
NHD Blueline Streams

Casa Grande Dr./Sierra Ave.
Northeast Corner Parcels
Fontana, CA



0 0.075 0.15 0.3 0.45 0.6 Miles

1 inch = 926 feet

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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Figure 6
FEMA 100-Year Flood Zones

Casa Grande Dr./Sierra Ave.
Northeast Corner Parcels
Fontana, CA



0 0.0125 0.025 0.05 0.075 0.1 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 133 feet

Figure 7
Soils

Casa Grande Dr./Sierra Ave.
Northeast Corner Parcels
Fontana, CA

ATTACHMENT C
SITE PHOTOS

	Photo 1. View into the site from the southeast corner of the parcel, facing north.
	Photo 2. View into the site from the southwest corner, facing north.

	Photo 3. Photo of existing access road on the east end of the parcel, facing north.
	Photo 4. View of typical California buckwheat habitat throughout the project site.

	Photo 4. View into the site from the northeast corner of the parcel. Photo shows buckwheat, mixed grasses, and chamise habitat.

Attachment A – Table of Database Queries (CNDDB, IPAC, CNPSEI)

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
Ambrosia monogyra	singlewhorl burrowbrush	Endangered/none	Chaparral, Sonoran desert scrub	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Anaxyrus californicus	arroyo toad	Endangered/Endangered	Sandy washes with terraces, quiet pools free from predators	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Anniella stebbinsi	southern California legless lizard	none/none	Coastal sand dunes, sandy washes, alluvial fans	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Arizona elegans occidentalis	California glossy snake	none/none	Arid scrub, rocky washes, grasslands, chaparral	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Artemisiospiza belli	Bell's sage sparrow	none/none	Sagebrush flats, alkaline flats with saltbush, semi-arid shrublands in the lowlands	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Athene cunicularia	burrowing owl	none/none	Open areas with little vegetation and existing burrows	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low..
Batrachoseps gabrieli	San Gabriel slender salamander	none/none	Rock piles/outcroppings near water	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Bombus crotchii	Crotch bumble bee	none/none	Grasslands and shrublands with abandoned small mammal burrows	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Calochortus plummerae	Plummer's mariposa lily	none/none	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland in granite/rocky soils	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
Chaetodipus fallax	northwestern San Diego pocket mouse	none/none	chaparral, grasslands, scrub forests and deserts; rarely found in cities. Requires low growing vegetation or rocky outcroppings and sandy soil for burrows.	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	none/none	Low-growing vegetation with rocky outcroppings and sandy soil	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Chorizanthe parryi var. *parryi*	Parry's spineflower	none/none	Chaparral, cismontane woodland, coastal scrub, valley foothill grassland	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Chorizanthe xanti var. *leucotheca*	white-bracted spineflower	none/none	Coastal scrub (alluvial fans), Mojavean desert scrub, Pinyon and juniper woodland	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered/ none	Alluvial fan chaparral and sage scrub with sandy loam substrates.	The shrub component on site is potentially suitable for this species. Potential to occur is moderate.
Dodecahema leptoceras	slender-horned spineflower	Endangered/ Endangered	Chaparral, cismontane woodland, coastal scrub (alluvial fan)	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Empidonax traillii extimus	Southwestern Willow Flycatcher	Endangered/Endangered	Riparian woodland with multiple canopy layers	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	Endangered/Endangered	Chaparral, Coastal scrub (alluvial fan)	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Gymnohyps californianus	California condor	Endangered/Endangered	Arid, remote areas in mountains with large, old growth trees for nesting	This species does not occur in San Bernardino County. The Project site is outside of the species range. Occurrence potential is none.
Horkelia cuneata var. *puberula*	mesa horkelia	none/none	Sandy or gravelly soils in chaparral, coastal scrub, or cismontane woodland	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
Lepus californicus bennettii	San Diego black-tailed jackrabbit	none/none	Variety of habitats with mixed grasses and shrub	Habitat on site is suitable. Species has potential to occur is high
lilium parryi	lemon lily	none/none	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Lycium parishii	Parish's desert-thorn	none/none	Creosote bush scrub	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Malacothamnus parishii	Parish's bush-mallow	none/none	Chaparral, coastal sage scrub	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Nyctinomops femorosaccus	pocketed free-tailed bat	none/none	Semi-arid habitats, roosting in mines, tunnels, caves, and rock crevices	Habitat on site includes a very dense layer of non-native grasses which, renders the habitat unsuitable for this species. Potential to occur is low.
Opuntia basilaris var. *brachyclada*	short-joint beavertail	none/none	Chaparral, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland	Habitat on site is primarily invasive grasses. Potential to occur is low.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	none/none	Coastal sage scrub, chaparral	The shrub component and soils on site are potentially suitable for this species. Potential to occur is moderate.
Phrynosoma blainvillii	coast horned lizard	none/none	Open areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains	Habitat on site is primarily invasive grasses. Potential to occur is low.
Polioptila californica	coastal California gnatcatcher	Threatened/none	Sage scrub	The shrub component and on site is potentially suitable for this species. Potential to occur is moderate.
Rana muscosa	southern mountain yellow-legged frog	Endangered/Endangered	Rocky, high altitude streams	No habitat on site for this species. Potential to occur is none.
Rhinichthys osculus ssp. *3*	Santa Ana speckled dace	none/none	Variety of aquatic habitats	No habitat on site for this species. Potential to occur is none.
	Riversidian Alluvial Fan Sage Scrub	none/none		Present
	Southern Riparian Forest	none/none		Absent

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
	Southern Sycamore Alder Riparian Woodland	none/none		Absent
Streptanthus bernardinus	Laguna Mountains jewelflower	none/none	Coniferous forest and chaparral	Habitat on site is primarily invasive grasses. Potential to occur is low.
Vireo bellii pusillus	least Bell's vireo	Endangered/Endangered	Riparian scrub and riparian woodland	No habitat on site for this species. Potential to occur is none.

JERICHO SYSTEMS INC.
Progress & Preservation

47 1st Street
Redlands, CA 92373-4601
(909) 915-5900

February 27, 2020

Kari Cano
Kimley-Horn
3880 Lemon Street, Suite 420
Riverside, CA 92501

RE: Biological Screening Memo
Sierra/Casa Grande Replacement Sites
Fontana, CA

Dear Ms. Cano,

Jericho Systems, Inc. (Jericho) is pleased to provide this Screening Memo for the Sierra/Casa Grande Replacement Sites (Project) located in the City of Fontana, San Bernardino County, California. This memo provides the results of our literature review and general biological resources assessment (BRA) and Jurisdictional Waters Delineation (JD) of the Project sites.

This report is designed to address potential effects of the proposed Project to designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), or species designated as sensitive by the California Department of Fish and Wildlife (CDFW), or the California Native Plant Society (CNPS). Attention was focused on sensitive biological resources known to occur locally (within a 3-mile radius of the Project area boundaries). This report also addresses resources protected under the Migratory Bird Treaty Act.

PROJECT LOCATION

Site 1 - NE of Palmetto Avenue and Valencia Avenue

This project site encompasses approximately 3.5 acres of various parcels within northeast corner of Palmetto Avenue and Valencia Avenue, just south of Arrow Boulevard (south of Foothill Boulevard). This group of four parcels includes Assessor's parcel numbers (APNs) 0192-221-32 (0.8 ac), 0192-221-44 (0.8 ac), 0192-221-06 (0.99 ac) and 0192-221-06 (0.99 ac). Most of the parcels are primarily developed as rural residential or rural industrial, except for 0192-221-32 which is fully developed as a church. The Project site is generally located south of State Route 210, east of Interstate 15 and south of Foothill boulevard in the City of Fontana, San Bernardino County California. It is bordered by Valencia Avenue to the south, Palmetto Avenue to the west and small businesses along Arrow Boulevard to the north and east. The Project site is depicted on the U.S. Geological Survey (USGS) *Fontana* 7.5-minute topographic map series, within the southeast one-quarter of Section 08, Township 1 South, Range 5 West, San Bernardino Base and Meridian, in the County of San Bernardino, State of California Figures 1a-3a)

Site 2 - NW of Malaga Street and Mango Avenue

This site encompasses Approximately 5.6 acres of various parcels along the north side of Malaga Avenue, immediately west of Mango Avenue, approximately 0.3 mile north of Foothill Boulevard. This group of 14 parcels includes Assessor's parcel numbers (APNs): 0190-181-09 through 0190-181-14 (six parcels); 0190-181-23 through 0190-181-29 (seven parcels); and 0190-181-16. These sites are mainly developed as rural residential. The site is bordered by single family homes to the north on Fairfax Street, Mango Avenue to the east, Malaga Street to the south and an undeveloped parcel to the west. The Project site is depicted on the U.S. Geological Survey (USGS) *Fontana* 7.5-minute topographic map series within the southwest one-quarter of Section 05, Township 1 South, Range 5 West, San Bernardino Base and Meridian, in the County of San Bernardino, State of California (Figures 1b-3b).

PROJECT DESCRIPTION

The City is processing an application for the development of the above-referenced sites as regional mixed use and warehouse/distribution. The final project will occur on one of two areas. The areas have been identified as groups of parcels, known as Site 1 and Site 2. All of the parcels within each of the site groups and their surroundings are mostly developed with rural residential and/or light industrial uses (such as wrecking yards).

SPECIAL STATUS SPECIES AND HABITAT

As stated above, the objective of this document is to determine whether Site 1 and/or Site 2 support special status or otherwise sensitive species and/ or their habitat, and to address the potential effects associated with the Proposed project on those resources. The species and habitats addressed in this document are based on database information and field investigation.

LITERATURE REVIEW

Prior to conducting the field survey, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity both sites. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the following for the *Fontana* USGS quadrangle:

- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USFWS Information for Planning and Consultation System (IPaC);
- California Natural Diversity Database (CNDDB) *Rarefind 5*);
- CNDDB Biogeographic Information and Observation System (BIOS);
- California Native Plant Society Electronic Inventory (CNPSEI) database;
- Calflora Database;
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers

The literature review provided a baseline from which to inventory the biological resources potentially occurring within the project site. Additional recorded occurrences of those species found on or near the project site were derived from database queries. The CNDDB database

was used, in conjunction with ArcGIS software, to locate the occurrence records and determine the distance from the project site (Figure 4a and 4b).

DATABASE RESULTS

According to the database queries, 32 sensitive species been documented to occur in the *Fontana* USGS 7.5-minute series quadrangle. Of the 32 sensitive species identified, 12 are State and/or federally listed as threatened, endangered, candidate endangered. Table 1 located in the back of the document represents a compiled list of results from IPaC, CNDDB and CNPS databases of listed species which have been documented within this quad and provides a potential to occur assessment based on the field investigation of the Project area and surveyor's knowledge of the species and local ecology (See attached database results)

CRITICAL HABITAT

The Project area is not located within or directly adjacent to any designated Critical Habitat.

FIELD INVESTIGATION

On February 21, 2020, Jericho Principle Ecologist, Shay Lawrey conducted a field survey of booth sites with focus on potential habitat for listed species, sensitive species and migratory birds. Ms. Lawrey is a qualified biologist with advanced degrees in Biology and 25 years of experience surveying for the sensitive species known to in California. Ms. Lawrey surveyed the Project site on a calm weather, overcast day, during peak animal activity, between 9:30 a.m. and 11:30 am.

General wildlife species were detected during field surveys by sight, calls, tracks, scat, or other signs. In addition to species observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. Mr. Lawrey assessed each site for habitat type structure, species composition/association, condition and human disturbances. The main focus of the survey was to identify sensitive species and habitat including jurisdictional waters and to evaluate the potential for sensitive species to occur within the either site and the surrounding vicinity.

EXISTING CONDITION – AFFECTED ENVIRONMENT

Prior development activities on both sites have altered the environment such that native plants have been completely removed. The climate here is arid.

Site 1 - NE of Palmetto Avenue and Valencia Avenue

Site 1 is an existing rural residential community that consists of ornamental vegetation (shrubs, trees and potted plants), and a few open areas consisting of non-native grasses and ruderal vegetation. This site is an active residential community with many dogs and cats. There is no natural, native habitat on this site or in the surrounding area. There are no areas that could potentially support listed-species, or any sensitive species known to occur locally. No sensitive species or listed species were observed during survey and none are expected to occur. No aquatic resources occur on site and as a result there are no fisheries issues to address. No drainages or indications of wetlands, hydric soils, naturally occurring indicator plant species were observed during the field survey nor are any expected to occur.

Site 2 - NW of Malaga Street and Mango Avenue

Site 2 is also an existing rural residential community that consists of ornamental vegetation (shrubs, trees and potted plants), and a few open areas consisting of non-native grasses and ruderal vegetation. This site is an active residential community with many dogs and cats. There is no natural, native habitat on this site or in the surrounding area. There are no areas that could potentially support listed-species, or any sensitive species known to occur locally. No sensitive species or listed species were observed during survey and none are expected to occur. No aquatic resources occur on site and as a result there are no fisheries issues to address. No drainages or indications of wetlands, hydric soils, naturally occurring indicator plant species were observed during the field survey nor are any expected to occur.

EFFECTS ANALYSIS

Federal Endangered Species Act (ESA)

The USFWS administers the federal ESA of 1973. The ESA provides a legal mechanism for listing species as either threatened or endangered, and a process of protection for those species listed. Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act. Take authorization can be obtained under Section 7 or Section 10 of the act.

No suitable habitat for any federally listed species exists within or adjacent to the Project area. No adverse Project-related direct or indirect impacts will not result to federally protected species.

California Endangered Species Act (CESA)

The CDFW administers the State CESA. The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species soon, in the absence of special protection or management. And a rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. Further, all raptors and their nests are protected under Section 3503.5 of the California Fish and Game Code (FGC). Species of Special Concern (SSC) is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection but signifies that these species are recognized as sensitive by CDFW.

No suitable habitat for State-listed species exists within or adjacent to the Project area. No adverse Project-related direct or indirect impacts will not result to State protected species.

Migratory Bird Treaty Act (MBTA)

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711) provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by

implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Both sites contain ornamental vegetation that provides suitable nesting opportunities for birds in general. As discussed, most birds are protected by the MBTA. Impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally January/February to August/September. However, if all work cannot be conducted outside of nesting season, preconstruction Nesting Bird Surveys are recommended prior to the commencement of any Project activities that may will result in vegetation disturbances within the nesting season (February to September).

CONCLUSION

The proposed Project will not adversely affect Critical Habitat as none exists within the either site. Further, the Project will not impact federal or state listed species either directly or indirectly. No habitat capable of supporting listed or sensitive species exist on either site. There will be no affect to listed species or to species considered sensitive.

Thank you for asking us to assist you with this project. If you have any questions or need any clarifications, contact me at (909) 915-5900 or at shay@jericho-systems.com.

Sincerely,



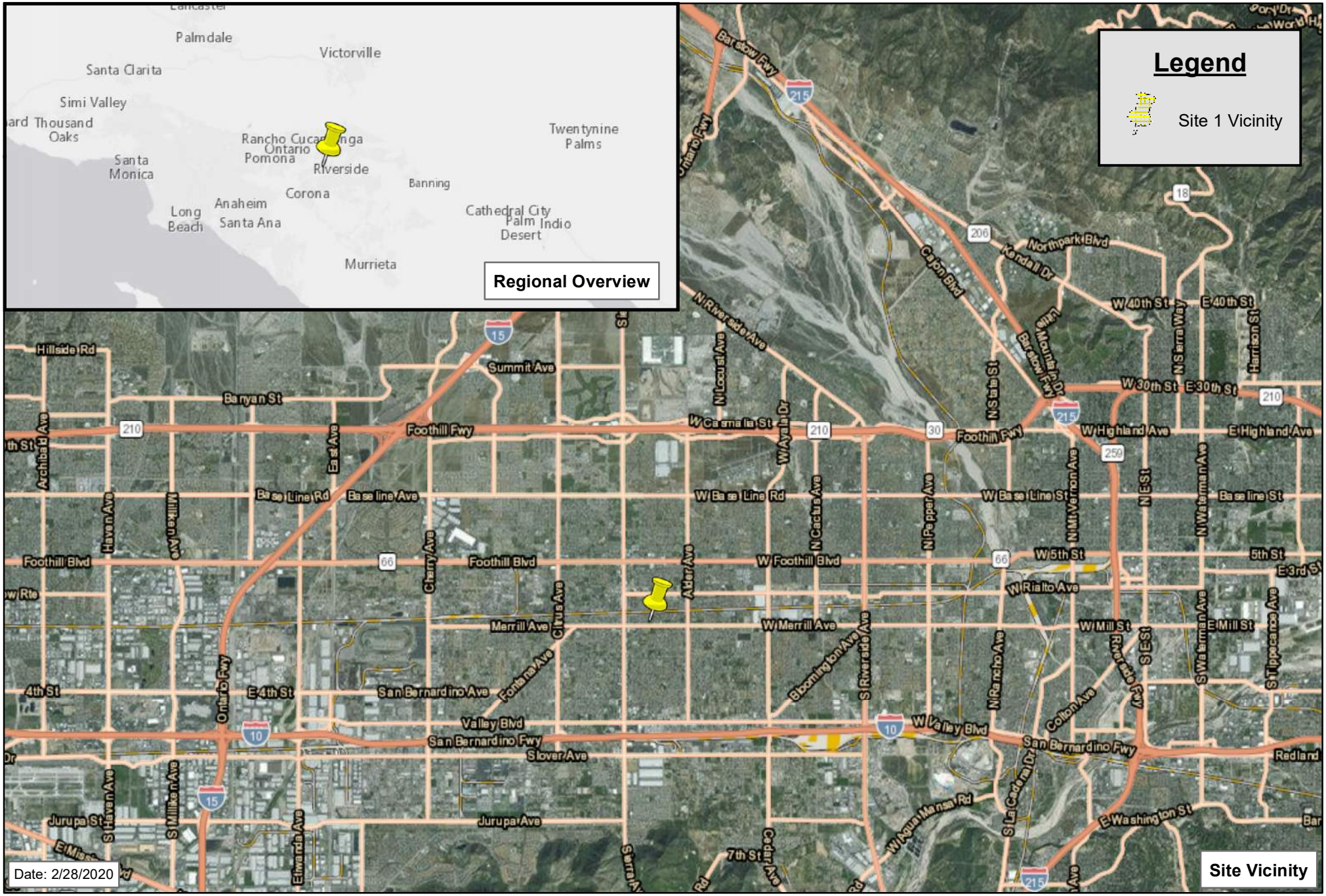
Shay Lawrey, President
Ecologist/Regulatory Specialist

Attachments:

- Site Photos
- Figures
- Table 1 Species Occurrence Potential
- Database Search Results

	Photo 1. Site 1 typical site conditions of the parcel group.
	Photo 2. Site 1 typical site conditions of the parcel groups where there is vacant land.

	Photo 3. Site 2 typical site conditions of the parcel group.
	Photo 4. Site 2 showing ornamental vegetation within the parcel group.



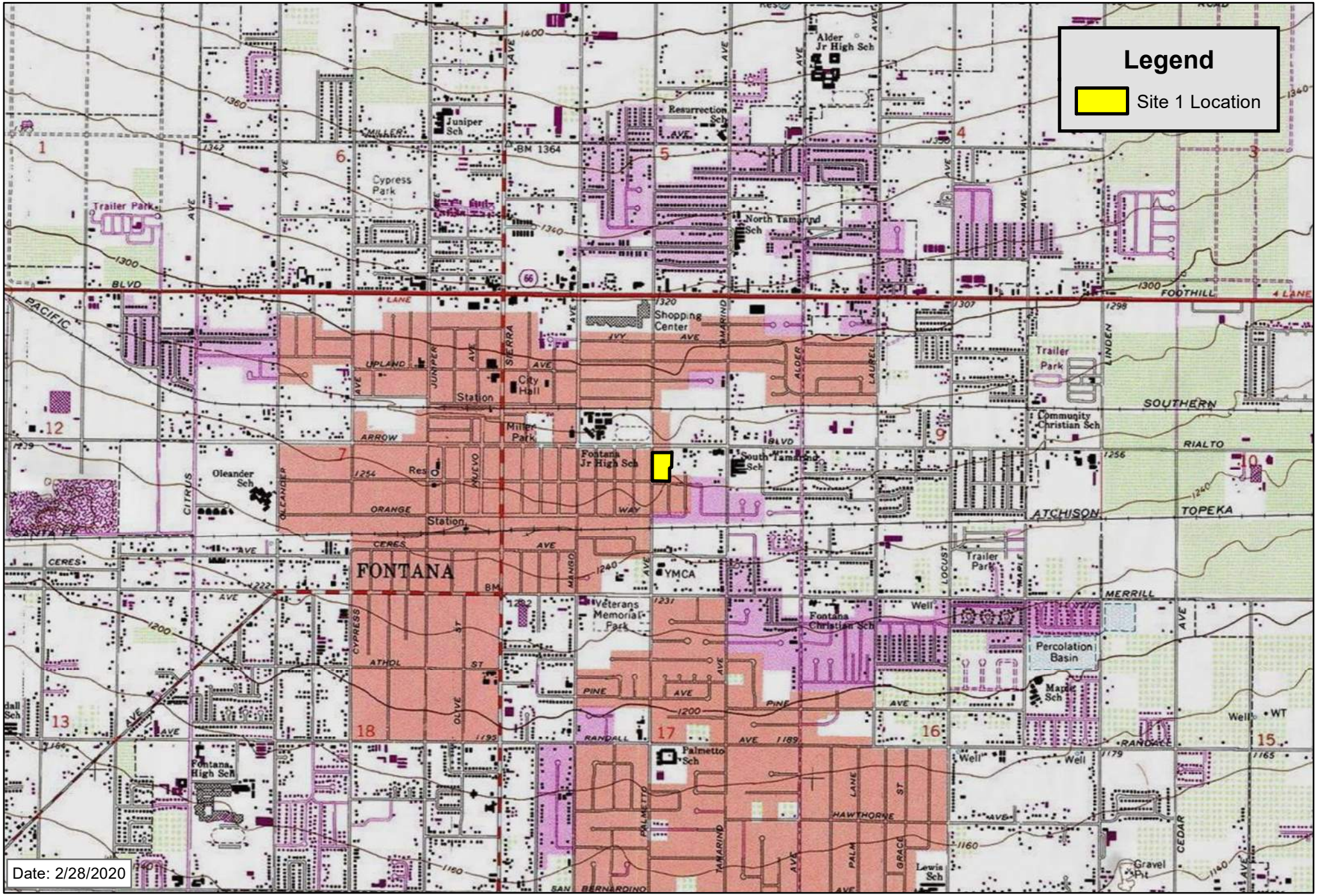
0 1.25 2.5 5 7.5 10 Miles

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

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Figure 1 - Site 1
Regional Overview - Site Vicinity

Casa Grande Replacement Sites



0 0.2 0.4 0.8 1.2 1.6 Miles

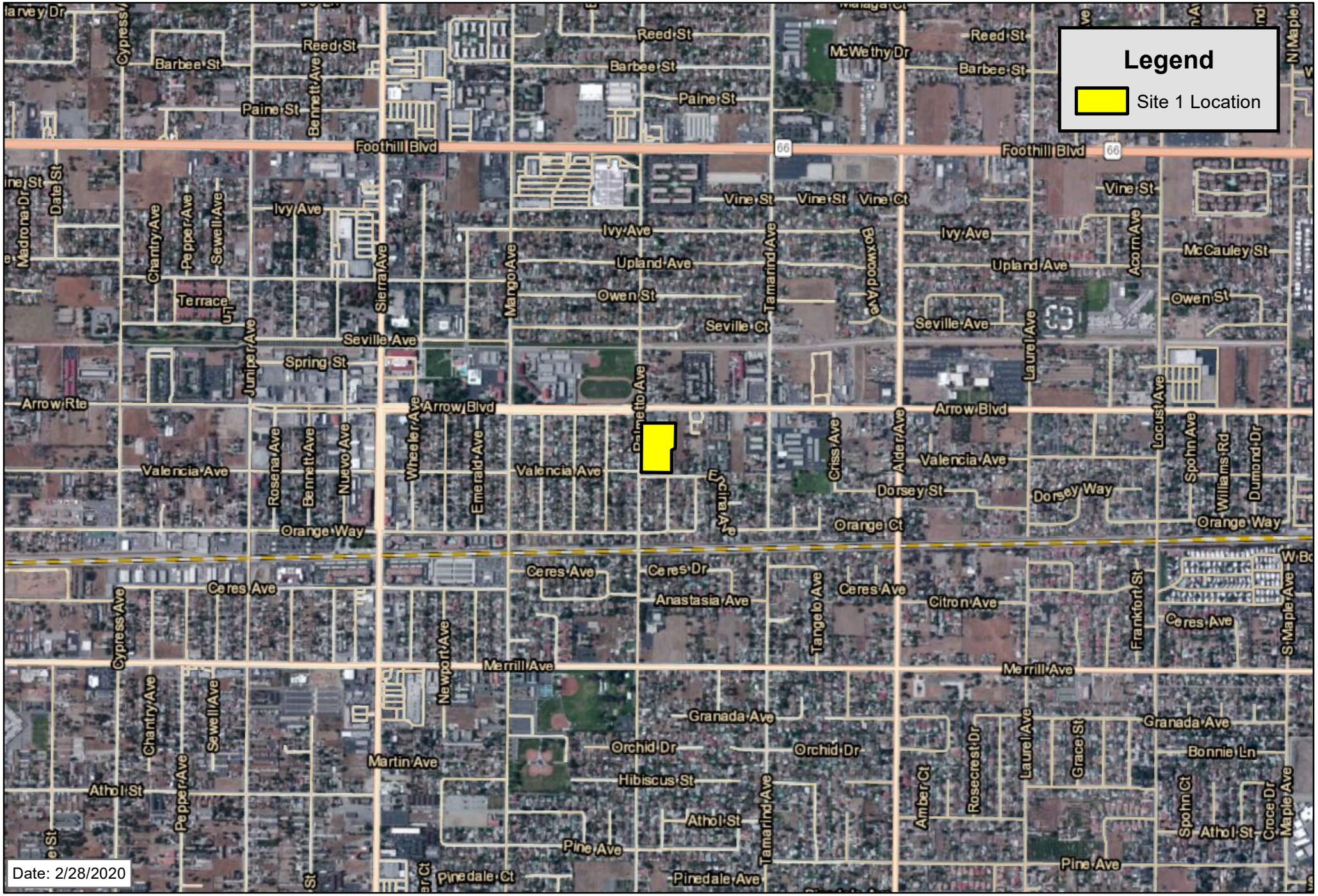
Imagery Date: 8/6/2017

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed
Source: USA Topographic Map, San Bernardino County

1 inch = 2,167 feet

Figure 2
Site 1 Project Location

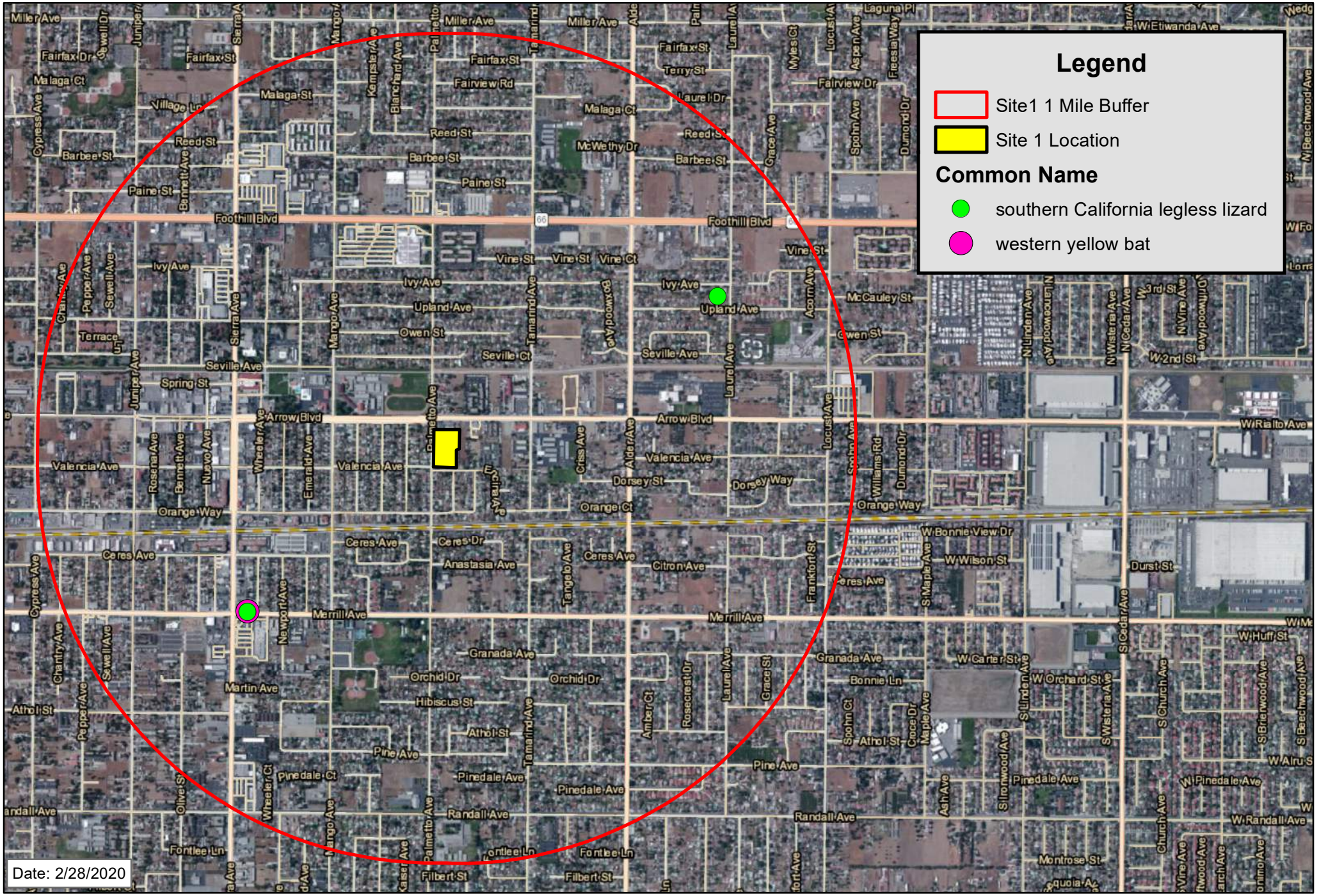
Casa Grande Replacement Sites

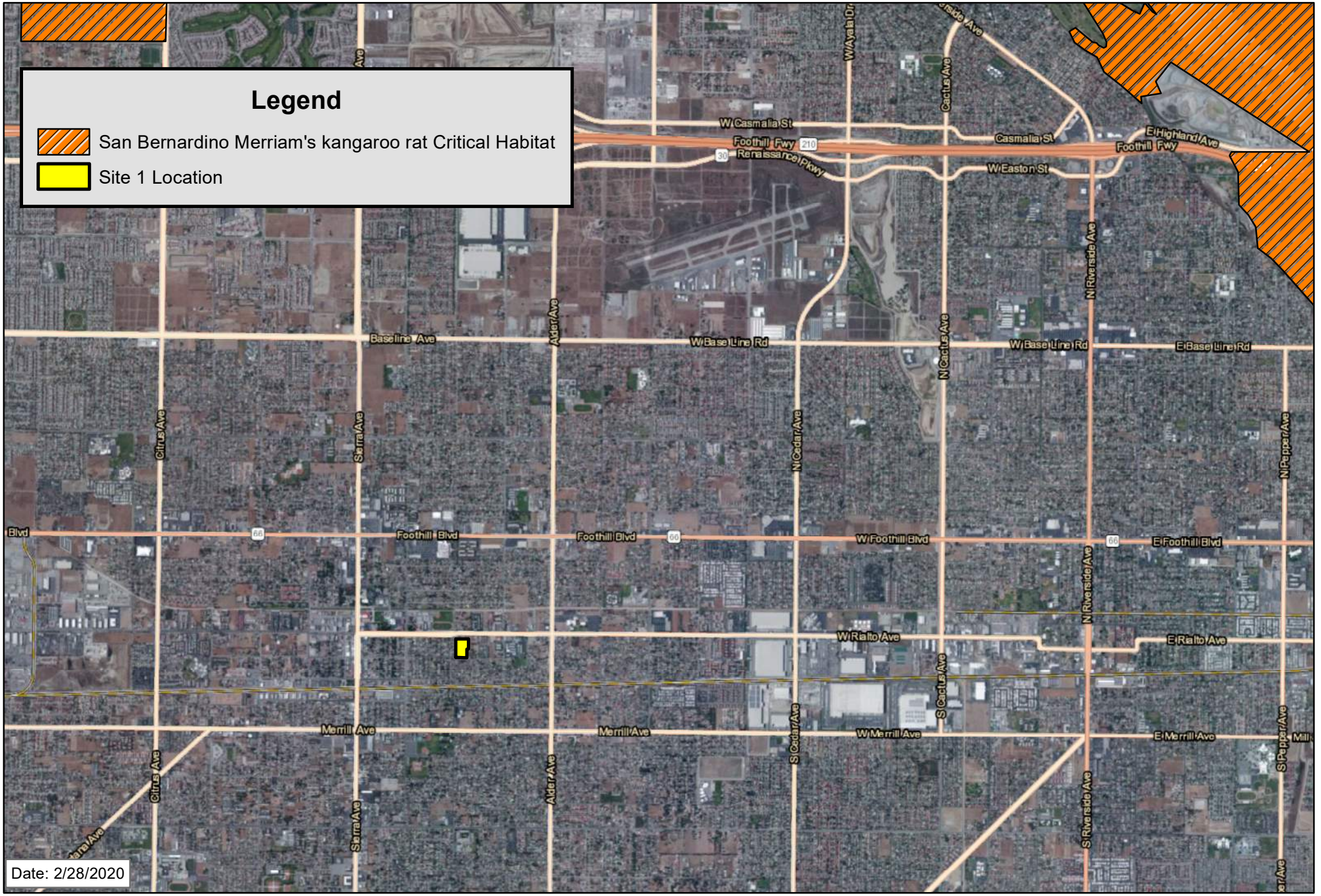


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Figure 3
Site 1 Project Location

Casa Grande Replacement Sites


Legend
Site1 1 Mile Buffer
Site 1 Location
Common Name
southern California legless lizard
western yellow bat
Date: 2/28/2020
0 0.15 0.3 0.6 0.9 1.2
Miles
Imagery Date: 8/6/2017
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
1 inch = 1,639 feet
Figure 4 - Site 1
1 Mile CNDDB
Casa Grande Replacement Sites



0 0.3 0.6 1.2 1.8 2.4 Miles

Imagery Date: 8/6/2017

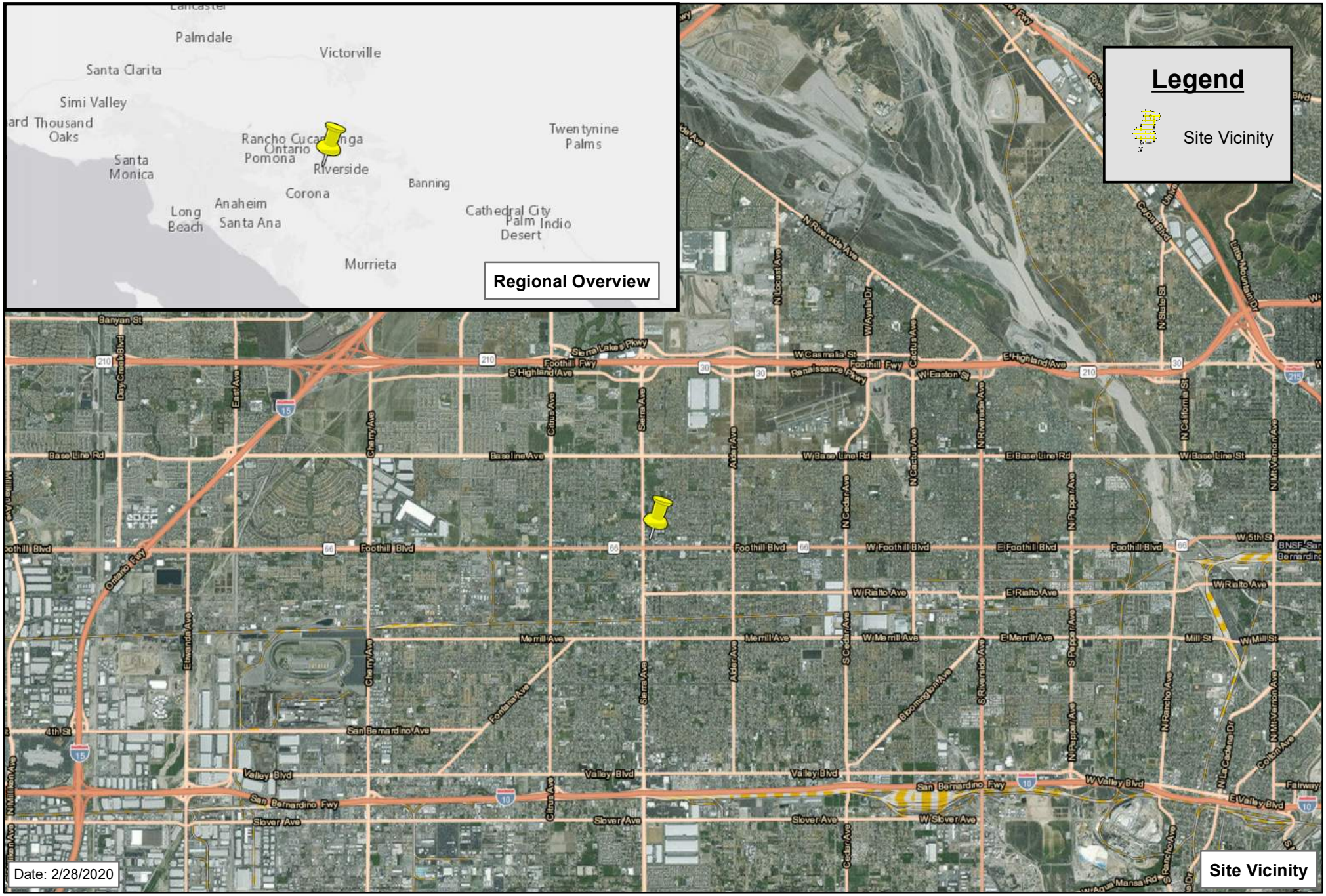
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 3,333 feet

Figure 5 - Site 1 Critical Habitat

Casa Grande Replacement Sites



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,

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Figure 1 - Site 2
Regional Overview - Site Vicinity

Casa Grande Replacement Sites

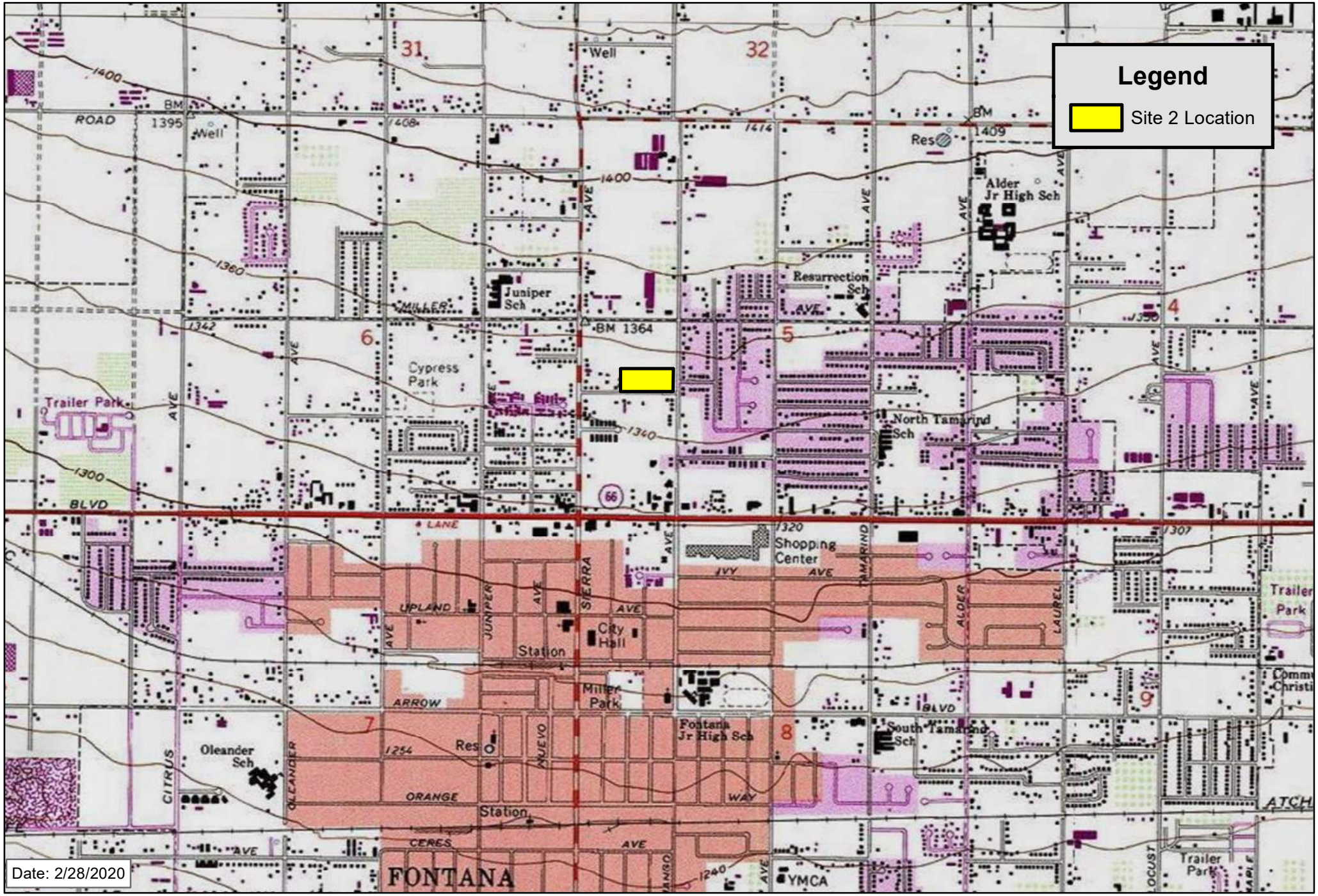
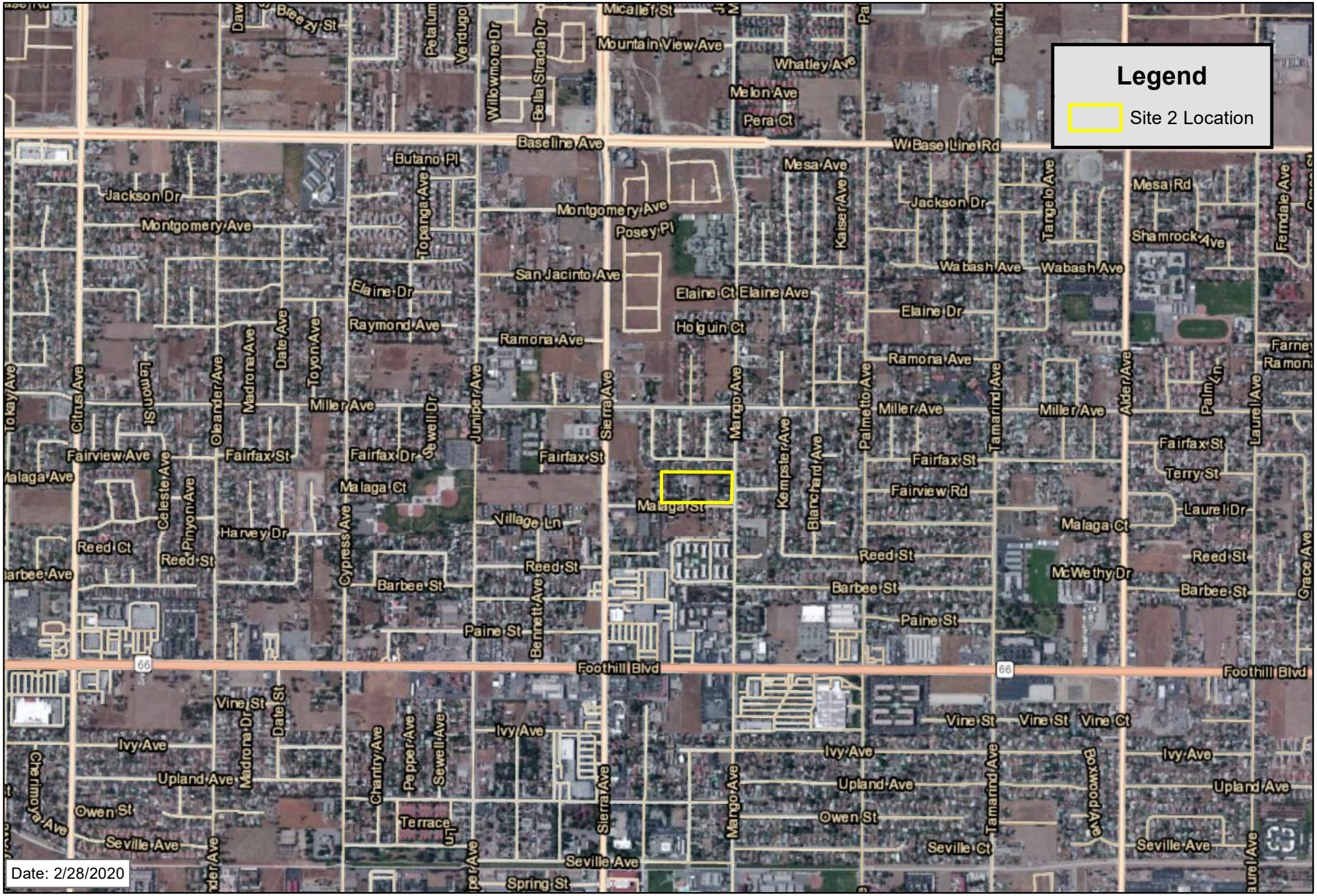


Figure 2
Site 2 Project Location

Casa Grande Replacement Sites



Date: 2/28/2020

0 0.1 0.2 0.4 0.6 0.8 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

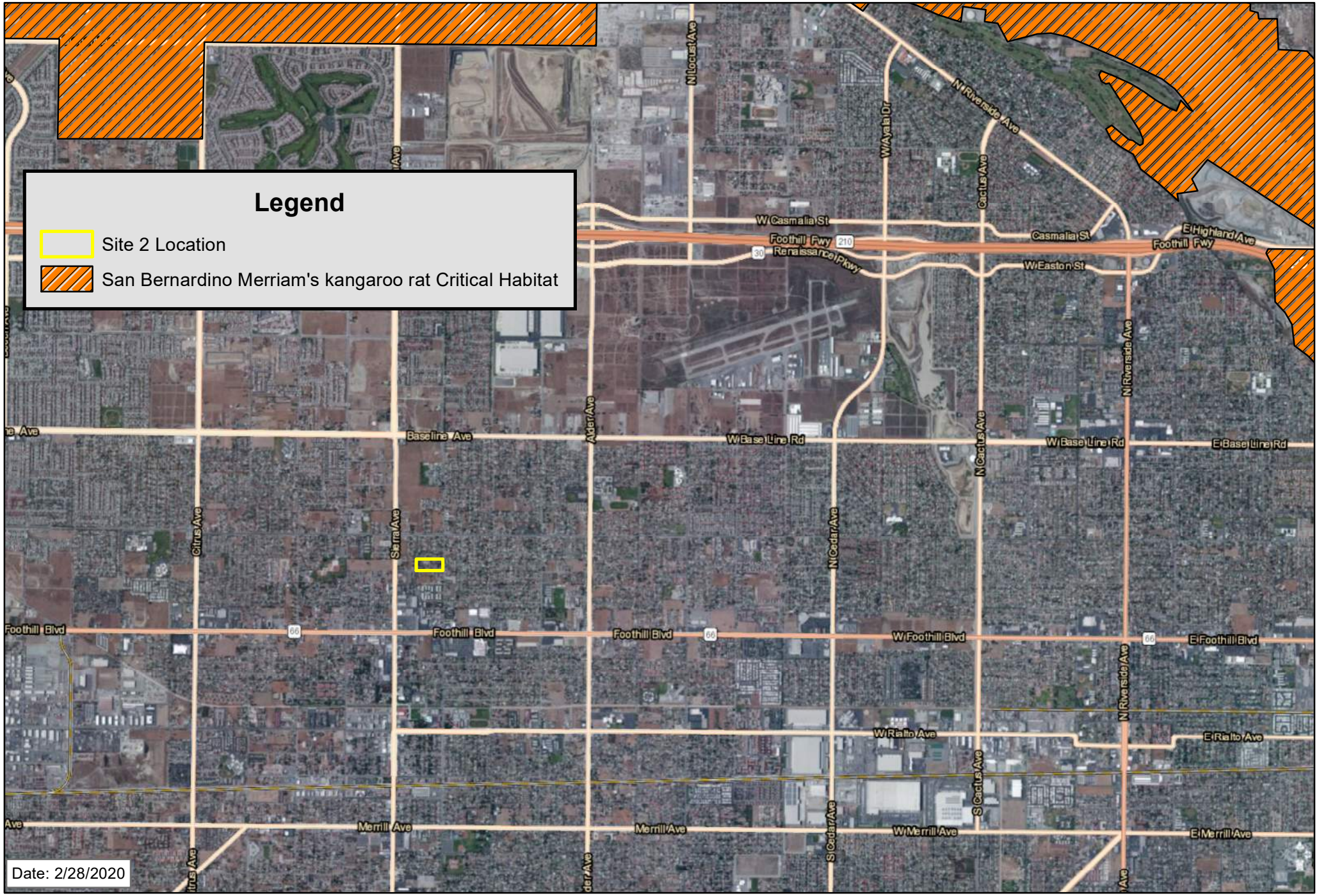
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1 inch = 1,250 feet

Figure 3
Site 2 Project Location

Casa Grande Replacement Sites


Legend
1 Mile Buffer - Zero Occurrences
Site 2 Location
Date: 2/28/2020
0 0.15 0.3 0.6 0.9 1.2
Miles
Imagery Date: 8/6/2017
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,
1 inch = 1,667 feet
Figure 4 - Site 2
1 Mile CNDDB - Zero Occurrences
Casa Grande Replacement Sites



0 0.3 0.6 1.2 1.8 2.4 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

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1 inch = 3,333 feet

Figure 5 - Site 2 Critical Habitat

Casa Grande Replacement Sites

Table 1:
Occurrence Potential Of Federally and/or State Listed Species or Otherwise Sensitive Species

Scientific Name	Common Name	Federal Status State Status	Habitat	Potential To Occur
Arenaria paludicola	marsh sandwort	Endangered Endangered	Marshes and swamps. Growing up through dense mats of Typha, Juncus, Scirpus, etc. in freshwater marsh. Sandy soil. 3-170 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Berberis nevinii	Nevin's barberry	Endangered Endangered	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub sandy or gravelly soils. 70-825 m	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Calochortus plummerae	Plummer's mariposa-lily	None None	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Endangered Endangered	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Chorizanthe parryi var. parryi	Parry's spineflower	None None	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Deinandra paniculata	paniculate tarplant	None None	Coastal scrub, Valley and foothill grassland, Vernal pools usually vernally mesic, sometimes sandy. 25-940 m	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered Endangered	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Horkelia cuneata var. puberula	mesa horkelia	None None	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None None	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal

Scientific Name	Common Name	Federal Status State Status	Habitat	Potential To Occur
				vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Lycium parishii	Parish's desert-thorn	None None	Coastal scrub, Sonoran desert scrub. -3-570 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Malacothamnus parishii	Parish's bush-mallow	None None	Chaparral, coastal sage scrub. In a wash. 305-455 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Monardella pringlei	Pringle's monardella	None None	Coastal scrub. Sandy hills. 300-400 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Senecio aphanactis	chaparral ragwort	None None	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Sphenopholis obtusata	prairie wedge grass	None None	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Symphyotrichum defoliatum	San Bernardino aster	None None	Valley & foothill grassland Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Agelaius tricolor	tricolored blackbird	None Threatened	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Athene cunicularia	burrowing owl	None None	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status	Habitat	Potential To Occur
			Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	
Polioptila californica californica	coastal California gnatcatcher	Threatened None	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Vireo bellii pusillus	least Bell's vireo	Endangered Endangered	Riparian forest | Riparian scrub | Riparian woodland Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None None	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered Candidate Endangered	Coastal scrub Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Lasiurus xanthinus	western yellow bat	None None	Deert wash Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None None	Coastal scrub Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Nyctinomops femorosaccus	pocketed free-tailed bat	None None	Joshua tree woodland | Pinon & juniper woodlands | Riparian scrub | Sonoran desert scrub	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status	Habitat	Potential To Occur
			Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	
Anniella stebbinsi	southern California legless lizard	None None	Broadleaved upland forest | Chaparral | Coastal dunes | Coastal scrub Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Arizona elegans occidentalis	California glossy snake	None None	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Phrynosoma blainvillii	coast horned lizard	None None	Chaparral | Cismontane woodland | Coastal bluff scrub | Coastal scrub | Desert wash | Pinon & juniper woodlands | Riparian scrub | Riparian woodland | Valley & foothill grassland Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Catostomus santaanae	Santa Ana sucker	Threatened None	Aquatic | South coast flowing waters Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Gila orcuttii	arroyo chub	None None	Aquatic | South coast flowing waters Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave & San Diego river basins.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.

Scientific Name	Common Name	Federal Status State Status	Habitat	Potential To Occur
			Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Endangered None	Aquatic | South coast flowing waters Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Bombus crotchii	Crotch bumble bee	None Candidate Endangered	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Cicindela tranquebarica viridissima	greenest tiger beetle	None None	Riparian woodland Inhabits the woodlands adjacent to the Santa Ana River basin. Usually found in open spots between trees.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Endangered None	Interior dunes Found only in areas of the Delhi Sands formation in southwestern San Bernardino & northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes & sparse vegetation. Oviposition req. shade.	Conditions on site consist of ornamental vegetation, non-native grasses or ruderal vegetation. The habitat for this species is not present on site. Occurrence potential is **low**.
Riversidian Alluvial Fan Sage Scrub		None		The habitat is not present on site.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

Global Rankings (Species or Natural Community Level):

G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure – Common; widespread and abundant.

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank**)** attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa.* The T-rank refers only to the global condition of ssp. *phaea*.

State Ranking:

S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
1B = Plants rare, threatened, or endangered in California and elsewhere.
2A = Plants presumed extirpated in California, but common elsewhere.
2B = Plants rare, threatened, or endangered in California, but more common elsewhere.
3 = Plants about which more information is needed; a review list.
4 = Plants of limited distribution; a watch list.

Threat Ranks:

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Fontana (3411714))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
Anniella stebbinsi southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
Arenaria paludicola marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Calochortus plummerae Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
Catostomus santaanae Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	
Chaetodipus fallax fallax northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	SSC
Chloropyron maritimum ssp. maritimum salt marsh bird's-beak	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
Chorizanthe parryi var. parryi Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
Cicindela tranquebarica viridissima greenest tiger beetle	IICOL02201	None	None	G5T1	S1	
Dipodomys merriami parvus San Bernardino kangaroo rat	AMAFD03143	Endangered	Candidate Endangered	G5T1	S1	SSC
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1
Gila orcuttii arroyo chub	AFCJB13120	None	None	G2	S2	SSC
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
Lasiurus xanthinus western yellow bat	AMACC05070	None	None	G5	S3	SSC
Lepidium virginicum var. robinsonii Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
Lepus californicus bennettii San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	SSC
Lycium parishii Parish's desert-thorn	PDSOL0G0D0	None	None	G4	S1	2B.3

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Malacothamnus parishii Parish's bush-mallow	PDMAL0Q0C0	None	None	GXQ	SX	1A
Monardella pringlei Pringle's monardella	PDLAM180J0	None	None	GX	SX	1A
Nyctinomops femorosaccus pocketed free-tailed bat	AMACD04010	None	None	G4	S3	SSC
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	AFCHA0209J	Endangered	None	G5T1Q	S1	
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T2Q	S2	SSC
Rhaphiomidas terminatus abdominalis Delhi Sands flower-loving fly	IIDIP05021	Endangered	None	G1T1	S1	
Riversidian Alluvial Fan Sage Scrub Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Sphenopholis obtusata prairie wedge grass	PMPOA5T030	None	None	G5	S2	2B.2
Symphyotrichum defoliatum San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 32

United States Department of the Interior

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http://www.fws.gov/carlsbad/

In Reply Refer To: February 24, 2020
Consultation Code: 08ECAR00-2020-SLI-0635
Event Code: 08ECAR00-2020-E-01529
Project Name: KH Site 1

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0635

Event Code: 08ECAR00-2020-E-01529

Project Name: KH Site 1

Project Type: ** OTHER **

Project Description: Empty parcel surveyed

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.097703562263916N117.42484253311434W



Counties: San Bernardino, CA

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker *Catostomus santaanae* Population: 3 CA river basins There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly *Rhaphiomidas terminatus abdominalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

Flowering Plants

NAME	STATUS
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
Santa Ana River Woolly-star *Eriastrum densifolium ssp. sanctorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6575	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

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In Reply Refer To: February 24, 2020
Consultation Code: 08ECAR00-2020-SLI-0634
Event Code: 08ECAR00-2020-E-01527
Project Name: KH Site 2

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0634

Event Code: 08ECAR00-2020-E-01527

Project Name: KH Site 2

Project Type: ** OTHER **

Project Description: Empty parcel surveyed

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.112505401228574N117.43366813590913W



Counties: San Bernardino, CA

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Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Appendix D

Cultural Resources Assessment;
Cultural Resources Investigation for Replacement Sites; and
Protection of Tribal Cultural Resources –
Gabrieleno Band of Mission Indians – Kizh Nation

CULTURAL RESOURCES ASSESSMENT

Sierra and Casa Grande General Plan and Zone Change Project

Fontana, San Bernardino County, California

Prepared for:

Kari Cano
Kimley Horn
3890 11th Street, Suite 215
Riverside, California 92501

Prepared by:

David Brunzell, M.A., RPA
Contributions by Nicholas Shepetuk, B.A.
BCR Consulting LLC
Claremont, California 91711

Project No. KIM1908

National Archaeological Data Base Information:
Type of Study: Cultural Resources Assessment/Inventory
Resources Recorded: KIM1908-H-1
Keywords: Fontana, Historic-Period Concrete Foundations
USGS Quadrangle: 7.5-minute *Devore, California* (1988)

BCRCONSULTING LLC

July 31, 2019

MANAGEMENT SUMMARY

BCR Consulting LLC (BCR Consulting) is under contract to Kimley Horn to conduct a Cultural Resources Assessment of the proposed Sierra and Casa Grande General Plan and Zone Change Project (the project) located in the City of Fontana (City), San Bernardino County, California. Tasks completed for the scope of work include a cultural resources records search, reconnaissance-level pedestrian cultural resources survey, Sacred Lands File search with the Native American Heritage Commission, and a paleontological resources overview. These tasks were performed pursuant to the California Environmental Quality Act (CEQA).

Data from the SCCIC revealed that 34 cultural resource studies have taken place resulting in the recording of 15 cultural resources (all historic-period) within a one-mile radius of the project site. None of the previous studies have assessed the project site for cultural resources. Several historic-period roads are located near the project site, although none have been identified within its boundaries. The inferred boundaries of the Grapeland Homestead and Waterworks (designated P-36-015376/California Point of Historical Interest [CPHI]-SBR-116) encompass a large portion of Fontana that includes the project site, however no cultural resources in the project site boundaries can be associated with P-36-015376. During the field survey, BCR Consulting archaeologists identified the remnants of a post-World War II residential complex, consisting of several concrete foundations and footings. It is temporarily designated KIM1908-H-1 and has been documented on Department of Park and Recreation (DPR) 523 forms. It is not recommended eligible for listing in the California Register of Historical Resources, and as such is not recommended a "historical resource" under CEQA. BCR Consulting recommends that no additional cultural resources work or monitoring is necessary during proposed project activities. However, if previously undocumented cultural resources are identified during earthmoving activities, a qualified archaeologist should be contacted to assess the nature and significance of the find, diverting construction excavation if necessary.

If human remains are encountered during the undertaking, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

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INTRODUCTION

BCR Consulting LLC (BCR Consulting) is under contract to Kimley Horn to conduct a Cultural Resources Assessment of the proposed Sierra and Casa Grande General Plan and Zone Change Project (the project) located in the City of Fontana (City), San Bernardino County, California. The project site is located in Section 20 of Township 1 North, Range 5 West, San Bernardino Baseline and Meridian, in the City of Fontana. It is depicted on the United States Geological Survey (USGS) *Devore, California* (1988) 7.5-minute topographic quadrangle (Figure 1).

NATURAL SETTING

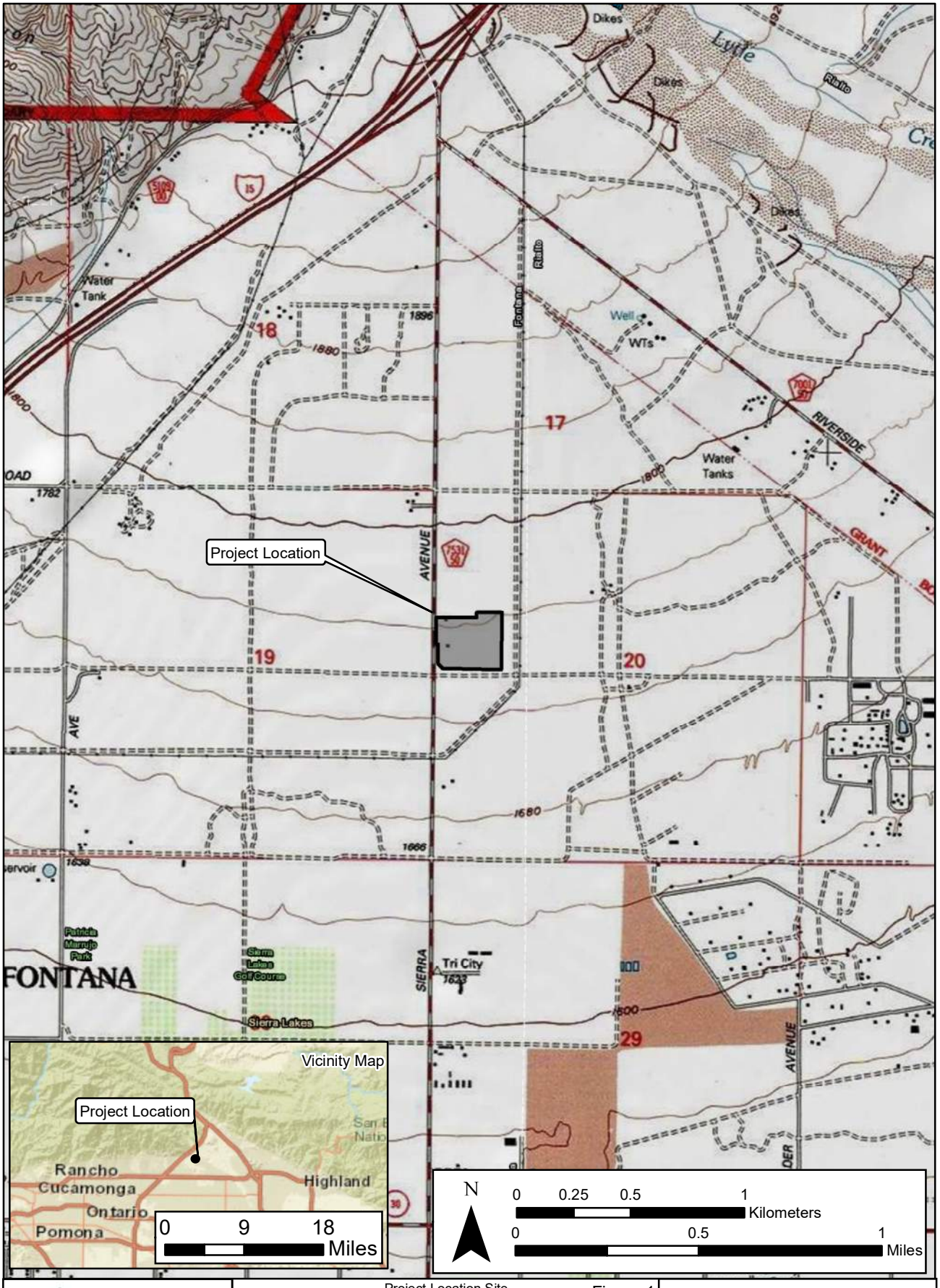
The elevation of the project site is approximately 1750 feet above mean sea level (AMSL). The property has been subject to disturbances related to surface erosion, weed abatement, and excavation for building construction and adjacent roads. The project site is covered with alluvial-fan deposits (Qyf 5) derived from the San Gabriel Mountains (Morton and Matti 2001). The current study has not yielded any evidence that such sediments have locally produced raw materials used in prehistoric tool manufacture. Local rainfall ranges from 5 to 15 inches annually (Jaeger and Smith 1971:36-37). The project site is flat, although the general slope conveys local water from northwest to southeast (USGS 1980).

Although recent and historic-period impacts have decimated local vegetation, remnants of a formerly dominant coastal sage scrub vegetation community have been sporadically observed in the area. Signature plant species include black sage (*Salvia mellifera*), California brittlebush (*Encelia californica*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemesia californica*), deerweed (*Lotus scoparius*), golden yarrow (*Eriophyllum confertiflorum*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), poison oak (*Toxicodendron diverilobum*), purple sage (*Salvia leucophyla*), sticky monkeyflower (*Mimulus aurantiacus*), sugar bush (*Rhus ovate*), toyon (*Heteromeles arbutifolia*), white sage (*Salvia apiana*), coastal century plant (*Agave shawii*), coastal cholla (*Opuntia prolifera*), Laguna Beach liveforever (*Dudleya stolonifera*), many-stemmed liveforever (*Dudleya multicaulis*), our Lord's candle (*Yucca whipplei*), prickly pear cactus (*Opuntia sp.*) (Williams et al. 2008:118-119). Signature animal species within Coastal Sage Scrub habitat include the kangaroo rat (*Dipodomys sp.*), California horned lizard (*Phrynosoma coronatum frontale*), orange throated whiptail (*Cnemidophorus hyperthrus*), San Diego horned lizard (*Phrynosoma coronatum blainvillii*), brown-headed cowbird (*Molothrus ater*), California gnatcatcher (*Polioptila californica californica*), California quail (*Callipepla californica*), and San Diego cactus wren (*Campylorhynchus brunnecapillus sandiegensis*) (Williams et al. 2008:118-120). Local native groups made use of many of these species (see Lightfoot and Parrish 2009).

CULTURAL SETTING

Prehistoric Context

The local prehistoric cultural setting has been organized into many chronological frameworks (see Warren and Crabtree 1986; Bettinger and Taylor 1974; Lanning 1963; Hunt 1960; Wallace 1958, 1962, 1978; Campbell and Campbell 1935), although there is no definitive sequence for the region. The difficulties in establishing cultural chronologies for western San Bernardino County are a function of its enormous size and the small amount of archaeological excavations conducted there. Moreover, throughout prehistory many groups have occupied the area and their territories often overlap spatially and chronologically



BCR CONSULTING LLC

Project Location Site
Sierra and Casa Grande General Plan and Zone Change Project
Reference: ESRI; USGS Devore, California (1988)

Figure 1

Kimley-Horn

resulting in mixed artifact deposits. Due to dry climate and capricious geological processes, these artifacts rarely become integrated in-situ. Lacking a milieu hospitable to the preservation of cultural midden, local chronologies have relied upon temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone. Such methods are instructive, but can be limited by prehistoric occupants' concurrent use of different artifact styles, or by artifact re-use or re-sharpening, as well as researchers' mistaken diagnosis, and other factors (see Flenniken 1985; Flenniken and Raymond 1986; Flenniken and Wilke 1989). Recognizing the shortcomings of comparative temporal indicators, this study recommends review of Warren and Crabree (1986), who have drawn upon this method to produce a commonly cited and relatively comprehensive chronology.

Ethnography

Although no prehistoric sites have been locally recorded, in general the project site is situated at an ethnographic nexus peripherally occupied by the Gabrielino and Serrano. Each group consisted of semi-nomadic hunter-gatherers who spoke a variation of the Takic language subfamily. Individual ethnographic summaries are provided below.

Gabrielino. The Gabrielino probably first encountered Europeans when Spanish explorers reached California's southern coast during the 15th and 16th centuries (Bean and Smith 1978; Kroeber 1925). The first documented encounter, however, occurred in 1769 when Gaspar de Portola's expedition crossed Gabrielino territory (Bean and Smith 1978). Other brief encounters took place over the years, and are documented in McCawley 1996 (citing numerous sources). The Gabrielino name has been attributed by association with the Spanish mission of San Gabriel, and refers to a subset of people sharing speech and customs with other Cupan speakers (such as the Juaneño/Luiseño/Ajachemem) from the greater Takic branch of the Uto-Aztecan language family (Bean and Smith 1978). Gabrielino villages occupied the watersheds of various rivers (locally including the Santa Ana) and intermittent streams. Chiefs were usually descended through the male line and often administered several villages. Gabrielino society was somewhat stratified and is thought to have contained three hierarchically ordered social classes which dictated ownership rights and social status and obligations (Bean and Smith 1978:540-546). Plants utilized for food were heavily relied upon and included acorn-producing oaks, as well as seed-producing grasses and sage. Animal protein was commonly derived from rabbits and deer in inland regions, while coastal populations supplemented their diets with fish, shellfish, and marine mammals (Boscana 1933, Heizer 1968, Johnston 1962, McCawley 1996). Dog, coyote, bear, tree squirrel, pigeon, dove, mud hen, eagle, buzzard, raven, lizards, frogs, and turtles were specifically not utilized as a food source (Kroeber 1925:652).

Serrano. The Uto-Aztecan "Serrano" people occupied the western Mojave Desert periphery. Kroeber (1925) applied the generic term "Serrano" to four groups, each with distinct territories: the Kitanemuk, Tataviam, Vanyume, and Serrano. Only one group, in the San Bernardino Mountains and West-Central Mojave Desert, ethnically claims the term Serrano. "The Serrano resided in an area that extended east of the Cajon Pass, located in the San Bernardino Mountains, to Twenty-nine Palms, the north foothills of the San Bernardino Mountains and south to include portions of the Yucaipa Valley" (Bean and Smith 1978:570). Both the Serrano and Cahuilla utilized the western Mojave region seasonally.

Evidence for longer term/permanent Serrano settlement in the western Mojave most notably includes the Serrano-named village of Guapiabit in Summit Valley (de Barros 2004). Access to water determined where the Serrano built their settlements/villages (Bean and Smith 1978). Most of the villages were located within the Sonoran life zone (Scrub Oak [*Quercus* sp.] and sagebrush [*Salvia* sp.]), or forest transition zone, (Ponderosa pine [*Pinus ponderosa*]) (Bean and Smith 1978; Kroeber 1925).

Like many neighboring tribes, the Serrano and Cahuilla were Takic (Uto-Aztecan language family) speakers (Lightfoot and Parrish 2009:341). Serrano traded with their neighbors and actively participated in a shell bead exchange economy with the Cahuilla, Luiseno, and Gabrielino (McCawley 1996). Occasionally, villages were located in the desert, adjacent to permanent water sources. Structures for families were usually circular domes, constructed of willow frames and tule thatching. Individual family homes were used primarily for sleeping and storage. Families conducted many of their daily routines outside of their house or under a ramada. A ramada consisted of a thatched roof supported by vertical poles in the ground, which provided a shaded work area (Lightfoot and Parrish 2009:344). Other village structures included a ceremonial house, granaries and sweathouses. Subsistence strategies focused on hunting and gathering, occasionally supplemented by fishing. Food preparation varied and included a variety of cooking techniques. These ranged from baking in earth ovens to parching. Food processing utilities included scrapers, bowls, baskets, mortars, and metates (Bean and Smith 1978). A lineage leader, or kika, administered laws and ceremonies from a large ceremonial house centrally located in most villages. The size of lineages is a matter of some dispute, but most probably numbered between 70 and 120 individuals (Lightfoot and Parrish 2009). Serrano people were organized into clans affiliated with one of two exogamous moieties. Clans were led by a hereditary chief who occupied the village “big house” where ceremonies took place and shamans were initiated (Bean and Smith 1978:572; Strong 1929).

History

Historic-era California is generally divided into three periods: the Spanish or Mission Period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present).

Spanish Period. The first European to pass through the area is thought to be a Spaniard called Father Francisco Garces. Having become familiar with the area, Garces acted as a guide to Juan Bautista de Anza, who had been commissioned to lead a group across the desert from a Spanish outpost in Arizona to set up quarters at the Mission San Gabriel in 1771 near what today is Pasadena (Beck and Haase 1974). Garces was followed by Alta California Governor Pedro Fages, who briefly explored the region in 1772. Searching for San Diego Presidio deserters, Fages had traveled through Riverside to San Bernardino, crossed over the mountains into the Mojave Desert, and then journeyed westward to the San Joaquin Valley (Beck and Haase 1974).

Mexican Period. In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Beattie and Beattie 1974).

American Period. The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers lost their ranchos through foreclosure. A series of disastrous floods in 1861–1862, followed by a significant drought further diminished the economic impact of local ranching. This decline combined with ubiquitous agricultural and real estate developments of the late 19th century, set the stage for diversified economic pursuits that have continued to proliferate to this day (Beattie and Beattie 1974; Cleland 1941).

Local Sequence (see McKenna and Brunzell 2001:4-7). During the early 19th century, Anglo trader Michael White traveled across southern California with explorer Jedediah Smith. Having befriended the Lugo family of Rancho San Bernardino, White settled in California by 1840. As an accepted member of the local Mexican community he became known as Miguel Blanco and was granted Rancho de Muscupiabe (northeast of the project site) by California Governor Manuel Micheltoreno in 1843 (Avina 1932:74). After California became a state, Anglo settlement continued to increase. By the late 1850s Mormon pioneers from Salt Lake City had purchased Rancho San Bernardino and began to settle at Rancho de Muscupiabe (Beck and Haase 1974:38). By the 1860s large tracts owned by the U.S. Government became available for homesteading.

Due to various population pressures, the Mormon pioneers began to recede to Salt Lake City in the 1870s. In the wake of the Mormon exodos, Greenberry Ferdinand Rubidoux Benton (GFRB) Perdew and his family settled near the present-day intersection of Summit Avenue and Citrus. Perdew's developments included a local school and post office, which attracted other members of the Perdew family, as well as the Scofield family, the Myers family, and the Ousterhout family. These people formed the settlement of Grapeland, which was named for grape and raisin vines planted locally between the 1860s and 1890s. Grapeland owed its early viability to these enterprising individuals, and to the entry of the Southern Pacific and the Santa Fe Railroads, locally established in 1875 and 1887 respectively.

In spite of burgeoning agricultural developments, water was difficult to come by and D.G. Scofield began to develop a local reservoir and canal system. Water rights were eventually acquired for Lytle Creek and the Grapeland Irrigation District was formed in an attempt to eliminate the need for marginally productive dry farming. While the district did construct reservoirs, canals, and ditches during the 1890s, shortages could not be overcome to the satisfaction of potential recipients, and by 1901 the Grapeland Irrigation District lost its rights to Lytle Creek. Those rights were eventually sold to the Fontana Development Company, signifying the end of Grapeland as an independent entity (McKenna and Brunzell 2001:5-6).

Significant development of the area did not resume until the Fontana Development Company surveyed and laid out a small community along the Santa Fe railroad. American rancher and entrepreneur Azariel Blanchard (A.B.) Miller purchased 17,000 acres locally and was largely responsible for transforming the area into a profitable center for citrus,

poultry, and livestock. A.B. Miller is credited with founding the community of Fontana in 1913 (Fontana Unified School District 2008). Like much of southern California, the success of railroads and agriculture during the early 20th century set the stage for expansion of agricultural and real estate development in the teens and twenties. After the slowdown of the depression years, demands related to World War II punctuated an economic revival. Expansion was particularly spurred on by the entry of Kaiser Steel into the area. Kaiser's local steel mill was constructed to supply wartime shipyards (Center for Land Use Interpretation 2013), which helped form the municipal and residential developments that persist in Fontana to this day.

PERSONNEL

David Brunzell, M.A., RPA acted as the Project Manager and Principal Investigator for the current study and compiled the technical report with contributions from BCR Consulting Staff Archaeologist Nicholas Shepetuk. Mr. Shepetuk completed the cultural resources records search at the South Central Coastal Information Center (SCCIC) and completed the pedestrian field survey.

RESEARCH DESIGN

This work was completed pursuant to CEQA, the Public Resources Code (PRC) Chapter 2.6, Section 21083.2, and California Code of Regulations (CCR) Title 14, Chapter 3, Article 5, Section 15064.5. The pedestrian cultural resources survey was intended to locate and document previously recorded and new cultural resources, including archaeological sites, features, isolates, and historic buildings, that exceed 45 years in age within defined project boundaries. The project site was examined using systematic pedestrian field survey methods. The study is intended to determine whether cultural resources are located within the project boundaries, whether any cultural resources are significant pursuant to the above-referenced regulations and standards, and to develop specific mitigation measures that will address potential impacts to existing or potential resources. Tasks pursued to achieve that end include:

- Cultural resources records search to review any studies conducted and the resulting cultural resources recorded within a one-mile radius of the project boundaries
- Additional research through various local and regional resources
- Systematic pedestrian survey of the project site
- Evaluation of California Register of Historical Resources (California Register) eligibility for any cultural resources discovered
- Development of recommendations for cultural resources documented within the project boundaries, following CEQA guidelines
- Completion of Department of Park and Recreation (DPR) 523 forms for any discovered cultural resources
- Vertebrate paleontology resources report through Dr. Samuel McLeod of the Los Angeles County Natural History Museum.

METHODS

Records Search

Prior to fieldwork, an archaeological records search was conducted at the SCCIC. This included a review of all recorded historic and prehistoric cultural resources, as well as a review of known cultural resources, and survey and excavation reports generated from projects completed within one mile of the project site. In addition, a review was conducted of the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), and documents and inventories from the California Office of Historic Preservation including the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures.

Additional Research. Additional land use history research was conducted through the San Bernardino County Assessor-Recorder-County Clerk, records of the General Land Office managed by the Bureau of Land Management, and various internet resources.

Field Survey

An archaeological pedestrian field survey of the project site was conducted on June 24, 2019. The survey was conducted by walking parallel transects spaced approximately 15 meters apart across 100 percent of the project site. Soil exposures, including natural and artificial clearings were carefully inspected for evidence of cultural resources. Vegetation was cleared by hand at regular intervals to maximize surface visibility.

RESULTS

Records Search

Data from the SCCIC revealed that 34 cultural resource studies have taken place resulting in the recording of 15 cultural resources (all historic-period) within a one-mile radius of the project site. None of the previous studies has assessed the project site for cultural resources. Several historic-period roads are located near the project site, although none have been identified within its boundaries. The inferred boundaries of the Grapeland Homestead and Waterworks (designated P-36-015376/California Point of Historical Interest [CPHI]-SBR-116) encompass a large portion of Fontana that includes the project site, however no cultural resources in the project site boundaries have been associated with P-36-015376 by the current study. The records search is summarized as follows:

Table A. Cultural Resources and Reports Located Within One Mile of the Project Site

USGS Quad.	Cultural Resources Within One Mile of Project Site	Studies Within 1 Mile
Devore, Calif. (1988)	P-36-6112: historic-period homestead (1/2 mile NE) P-36-6589: Grapeland Irrigation District Canal (1/2 mile W) P-36-8697: historic-period farm/ranch complex (1/4 mile E) P-36-8698: historic-period dirt road (adjacent E) P-36-10878: historic-period stone trough (3/4 mile N) P-36-11506: historic-period bldg. footing (1/2 mile W) P-36-11507: historic-period refuse (1/2 mile SW) P-36-11508: historic-period road (1/2 mile W) P-36-11509: historic-period road (1/4 mile SW) P-36-11510: historic-period road (1/4 mile W)	SB-106-1407, 1501, 1611, 1737, 1751, 1781, 1847, 1983, 2064, 2096, 2621, 3049, 3538, 3634, 4012, 4013, 4016, 4017, 4020, 4021, 4022, 4552, 4555, 5088, 5691, 5766, 6982, 6984, 6986, 7517, 7582, 7783, 7813, 8104

USGS Quad.	Cultural Resources Within One Mile of Project Site	Studies Within 1 Mile
	P-36-11511: historic-period road (adjacent SW) P-36-11512: historic-period road (1/2 mile S) P-36-11513: historic-period road (Adjacent W) P-36-15376: Grapeland Homestead (Encompasses Project Site) P-36-21495: historic-period cobble debris (1/4 mile SE)	

Additional Research. The project site was first privately owned by Albert G Pier as part of a land patent that encompassed the northwest quarter of section 20, Township 1 North, Range 5 West (General Land Office 1892). One residential building was constructed on the project site between 1942 and 1959 (U.S. Army Corps of Engineers 1942; United States Department of Agriculture 1959) and was demolished between 1980 and 1994 (United States Department of Agriculture 1980, 1994). Research did not reveal names of any builders or residents, until 1975 when Lloyd P. Remy, of Los Angeles owned the property (see https://www.sbcounty.gov/ assessor/pims).

Field Survey

During the field survey, BCR Consulting staff carefully inspected the project site, and identified one historic-period site within its boundaries. Surface visibility was approximately 50 percent within the project site. Ground disturbances were severe and resulted from a variety of natural and artificial factors, including surface erosion and excavation related to adjacent roads, weed abatement, and building construction. Sediments included silty sand with a high concentration of granitic cobbles that covered the project site.

KIM1908-H-1. This site consists of the remnants of a residential complex built between 1942 and 1959 (US Army Corps of Engineers 1942; United States Department of Agriculture 1959). One concrete building foundation, two concrete structure footings, and the foundation of a pumphouse were identified within the site boundaries. No diagnostic artifacts were identified on the surface and a lack of soil accumulation indicates negligible potential for significant buried resources.

SIGNIFICANCE EVALUATION

During the field survey, one historic-period resource was identified. CEQA (PRC Chapter 2.6, Section 21083.2 and CCR Title 145, Chapter 3, Article 5, Section 15064.5) calls for the evaluation and recordation of historic and archaeological resources. The criteria for determining the significance of impacts to cultural resources are based on Section 15064.5 of the *CEQA Guidelines* and Guidelines for the Nomination of Properties to the California Register. Properties eligible for listing in the California Register and subject to review under CEQA are those meeting the criteria for listing in the California Register, National Register, or designation under a local ordinance.

Significance Criteria

California Register of Historical Resources. The California Register criteria are based on National Register criteria. For a property to be eligible for inclusion on the California Register, one or more of the following criteria must be met:

1. It is associated with the events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
2. It is associated with the lives of persons important to local, California, or U.S. history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of a master, possesses high artistic values; and/or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resources." (CCR 4852 [d][2]). The California Register also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association.

California Register Evaluation

The project site occupies a portion of the Grapeland Irrigation District. However, the features recorded post-date that resource considerably and could not be associated with the district or indeed with any specific regional historic context or important events. It is therefore not eligible for the California Register under Criterion 1. Criterion 2: Extensive research has failed to connect the project site with the lives of persons important to local, California, or U.S. history. Criterion 3: The project site and its constituent historic-period features do not represent the work of an important creative individual or possess high artistic values. Criterion 4: The features identified have not and are not likely to yield information important in prehistory or history and are therefore not eligible for listing under Criterion 4. The subject property and its historic-age features are therefore recommended not eligible under any of the four criteria for listing in the California Register, and as such are not recommended historical resources under CEQA.

City Designation Evaluation

Research has not indicated that any of these resources have been previously designated as, or meet criteria for, City Historical Designation (City of Fontana 2018).

RECOMMENDATIONS

BCR Consulting conducted a Cultural Resources Assessment of the proposed project, pursuant to CEQA. BCR Consulting archaeologists identified the remnants of a post-World War II residential complex, consisting of several concrete foundations and footings. It is temporarily designated KIM1908-H-1 and has been documented on Department of Park and Recreation (DPR) 523 forms. It is not recommended eligible for listing in the California Register of Historical Resources, and as such is not recommended a "historical resource" under CEQA. Therefore, no significant impacts related to archaeological or historical resources is anticipated and no further investigations or monitoring are recommended for the proposed project unless:

- the proposed project is changed to include areas not subject to this study;

- the proposed project is changed to include the construction of additional facilities;
- cultural materials are encountered during project activities.

Although the current study has not indicated sensitivity for cultural resources within the project boundaries, ground disturbing activities always have the potential to reveal buried deposits not observed on the surface during previous surveys. Prior to the initiation of ground-disturbing activities, field personnel should be alerted to the possibility of buried prehistoric or historic cultural deposits. In the event that field personnel encounter buried cultural materials, work in the immediate vicinity of the find should cease and a cultural resources professional that meets the U.S. Secretary of the Interior Professional Qualification Standards for Archaeology (qualified archaeologist) should be retained to assess the significance of the find. The qualified archaeologist would have the authority to stop or divert construction excavation as necessary. If the qualified archaeologist finds that any cultural resources present meet eligibility requirements for listing in the California Register of Historical Resources or the National Register of Historic Places, plans for the treatment, evaluation, and mitigation of impacts to the find would be developed. Prehistoric or historic cultural materials that may be encountered during ground-disturbing activities include:

- historic artifacts such as glass bottles and fragments, cans, nails, ceramic and pottery fragments, and other metal objects;
- historic structural or building foundations, walkways, cisterns, pipes, privies, and other structural elements;
- prehistoric flaked-stone artifacts and debitage (waste material), consisting of obsidian, basalt, and or cryptocrystalline silicates;
- groundstone artifacts, including mortars, pestles, and grinding slabs;
- dark, greasy soil that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire affected rocks.

If human remains are encountered during the undertaking, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

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APPENDIX A

PROJECT PHOTOGRAPHS



Photo 1: Project Site Overview (View Northeast)



Photo 2: Project Site Overview (View South)

APPENDIX B

DEPARTMENT OF PARK AND RECREATION 523 FORMS

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI #**

PRIMARY RECORD

Trinomial
NRHP Status Code

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** KIM1908-H-1

***P2. Location:** ☑ **Not for Publication** ☐ **Unrestricted** ***a. County:** San Bernardino

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Devore **Date:** 1988 **T** 1N; **R** 5W; SW ¼ **of** NW ¼ **of Sec** 20**;** SB **B.M.**

c. Address: N/A City: Fontana Zip: 92335

d. UTM: Zone: 11; 459894 mE/ 3779828 mN (SW Corner of Feature 1); (G.P.S.; NAD83)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 1750 AMSL. From the intersection of Casa Grande Dr and Sierra Ave the northwestmost foundation is approximately 420 feet northeast.

***P3a. Description:** (Describe resource and major elements: design, materials, condition, alterations, size, setting, and boundaries) This site consists of the remnants of a residential complex built between 1942 and 1959 (US Army Corps of Engineers 1942; United States Department of Agriculture 1959). There is one concrete building foundation (Feature 1), two structure footings (Features 2 and 3), and the foundation of a pumphouse (Feature 4) within the site boundaries. Feature 1 measures approximately 46 feet (east to west) by 70 feet (north to south). Feature 2, about 140 feet southwest of Feature 1, is a rectangular concrete footing measuring approximately 50 feet (east to west) by 15 feet (north to south). Feature 3, about 100 feet southeast of Feature 1, is a structure footing that measures 50 feet (east to west) by 12 feet (north to south). Feature 4 is a well-pump foundation measuring eight by eight feet. No diagnostic artifacts were identified on the surface and a lack of soil accumulation indicates negligible potential for significant buried resources. The site was first privately owned by Albert G Pier as part of a land patent that encompassed the northwest quarter of section 20, Township 1 North, Range 5 West (General Land Office 1892). There is no evidence that Mr. Pier ever improved the property. One residential building was constructed on the site between 1942 and 1959 (U.S. Army Corps of Engineers 1942; United States Department of Agriculture 1959) and was demolished between 1980 and 1994 (United States Department of Agriculture 1980, 1994). County Records did not reveal names of any builders or residents, until 1975 when Lloyd P. Remy owned the property (see https://www.sbcounty.gov/assessor/pims).

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***P3b. Resource Attributes:** (List attributes and codes) HP2. Single family property HP4. AH2. Foundations / structure pads

***P4. Resources Present:** ☐Building ☐Structure ☐Object ☑Site ☐District ☐Element of District ☐Other

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Photo 1: Site Overview (View East)

***P6. Date Constructed/Age:** ☑Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**
Kimley-Horn
3880 Lemon Street, #420
Riverside, California 92501

***P8. Recorded by:**
N. Shepetuk
BCR Consulting LLC
505 W. 8th Street
Claremont, CA 91711

***P9. Date Recorded:** 06/24/19

***P10. Survey Type:** Intensive

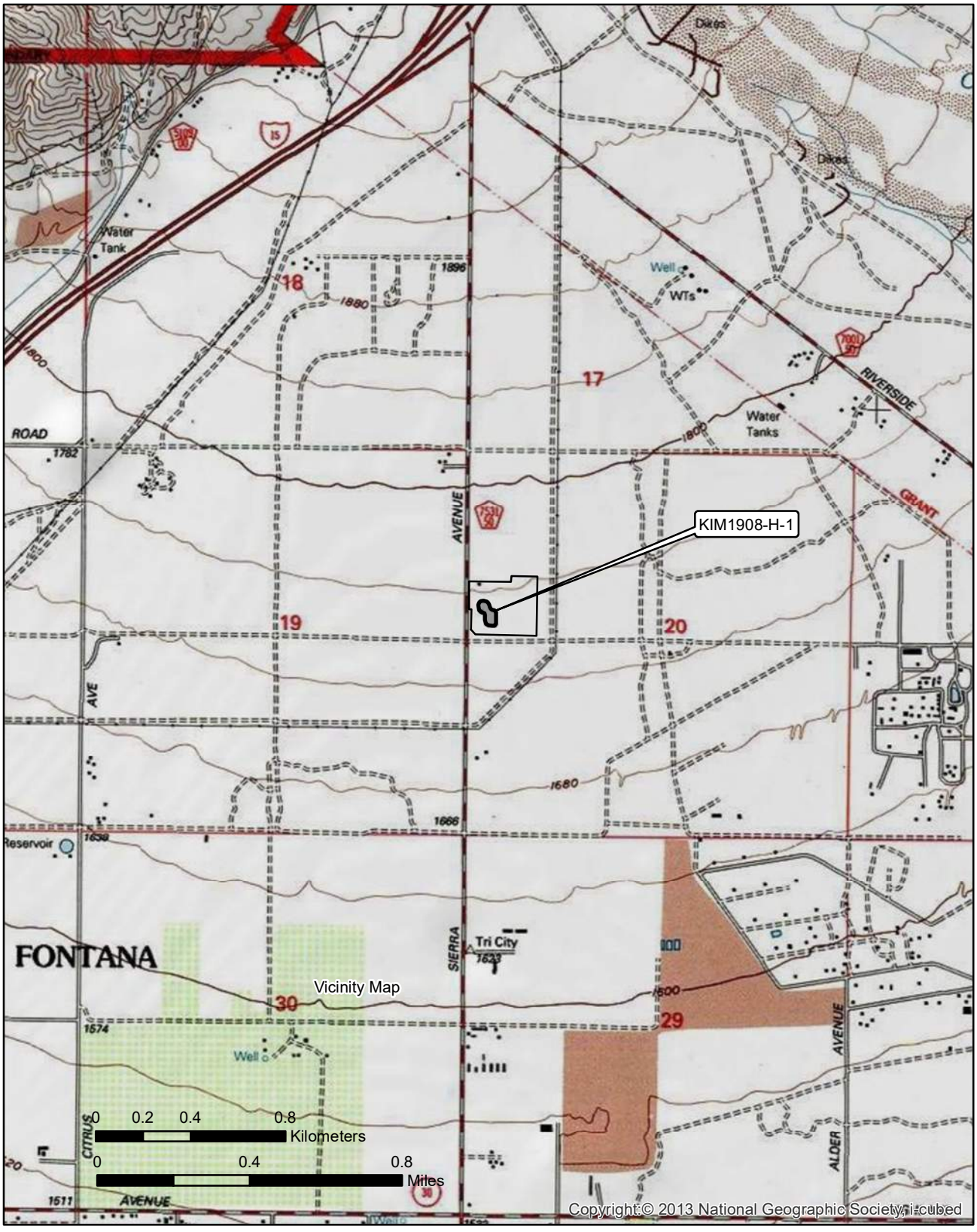
***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Cultural Resources Assessment Sierra and Casa Grande General Plan and Zone Change Project, Fontana, San Bernardino County, California.* BCR Consulting.

***Attachments:** ☐NONE ☑Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐Other (List):

State of California - The Resources Agency DEPARTMENT OF PARKS AND RECREATION **LOCATION MAP**	Primary # HRI# Trinomial

 ***Resource Name or#:** KIM1908-H-1

***Map Name:** Devore, California ***Scale:** 1:24,000 ***Date of Map:** 1988



APPENDIX C

NATIVE AMERICAN HERITAGE COMMISSION COMMUNICATIONS

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

July 15, 2019

Nicholas Shepetuk
BCR Consulting

VIA Email to: nickshepetuk@gmail.com

RE: Sierra and Casa Grande General Plan and Zone Change Project, San Bernardino County

Dear Mr. Shepetuk:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
7/15/2019

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Rroad — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla, Serrano
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk, Vanyume, Tataviam
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Fax: (909) 864-3370
lclauss@sanmanuel-nsn.gov

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Sierra and Casa Grande General Plan and Zone Change Project, San Bernardino County.

APPENDIX D

PALEONTOLOGICAL OVERVIEW

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

8 July 2019

BCR Consulting
505 West 8th Street
Claremont, CA 91711

Attn: Nicholas Shepetuk, Staff Archaeologist

re: Paleontological resources for the Vertebrate Paleontology Records Search for the proposed Sierra and Casa Grande General Plan and Zone Change Project, in the City of Fontana, San Bernardino County, project area

Dear Nicholas:

I have conducted a thorough check of our paleontology collection records for the locality and specimen data for the proposed Sierra and Casa Grande General Plan and Zone Change Project, in the City of Fontana, San Bernardino County, project area as outlined on the portion of the Devore USGS topographic quadrangle map that you sent to me via e-mail on 24 June 2019. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities farther afield that occur in sedimentary deposits similar to those that may occur at depth in the proposed project area.

In the entire proposed project area the surficial sediments are composed of younger Quaternary Alluvium, derived broadly as alluvial fan deposits from the San Gabriel Mountains to the north via Lytle Creek that currently flows to the north and east. These deposits typically do not contain significant vertebrate fossils, at least in the uppermost layers, but they may contain pockets of finer-grained sediments, particularly at depth, that may well contain significant vertebrate fossil remains. Our closest vertebrate fossil locality from somewhat similar basin deposits is LACM 7811, quite to the south-southwest of the proposed project area in the Jurupa Valley north of Norco, that produced a fossil specimen of whipsnake, *Masticophis*, at a depth of 9 to 11 feet below the surface. Our next closest fossil vertebrate locality from somewhat similar

Quaternary deposits is LACM 1207, south-southwest of the proposed project area between Corona and Norco, that produced a fossil specimen of deer, *Odocoileus*.

Shallow excavations in the younger Quaternary alluvial fan deposits exposed throughout the proposed project area are unlikely to encounter significant vertebrate fossils. Deeper excavations in the proposed project area that extend down into older finer-grained Quaternary deposits, however, may well encounter significant remains of fossil vertebrates. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains while not impeding development. Sediment samples should also be collected from the finer-grained deposits in the proposed project area and processed to determine their small fossil potential. Any fossils collected should be placed in an accredited scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

April 15, 2020

Kari Cano
Kimley-Horn
3880 Lemon Street, Suite 420
Riverside, California 92501

Subject: Cultural Resources Investigation of the Sierra/Casa Grande Project, Fontana, San Bernardino County, California (BCR Consulting Project KIM2001)

Dear Kari:

BCR Consulting LLC (BCR Consulting) was retained by Kimley-Horn to complete a cultural resources investigation of the Sierra-Casa Grande Project (project) located in the City of Fontana, San Bernardino County, California. The project consists of two properties located in Sections 5 and 8 of Township 1 South, Range 5 West, San Bernardino Baseline and Meridian, in the City of Fontana. They are depicted on the Sierra/Casa Grande Exhibit 1: Replacement Sites (Attachment B). The purpose of this study is to illustrate potential for development constraints associated with the presence of and/or potential for cultural resources within the project boundaries. It is not intended to provide regulatory compliance.

Cultural Resources Records Search

BCR Consulting Archaeological Crew Chief Joseph Orozco, M.A., RPA conducted the cultural resources records search at the South-Central Coastal Information Center (SCCIC) at California State University, Fullerton. The records search included a review of all recorded historic and prehistoric archaeological sites, as well as built environment resources within one mile of the project sites. The research also reviewed known cultural resource reports completed in the vicinity. The research revealed that 17 cultural resource studies have taken place resulting in 17 cultural resources recorded within one mile of the project sites. The project sites have not been subject to previous cultural resource assessments. The records search results are summarized in Table A.

Table A. Records Search Results (One-Mile Radius)

USGS Quad	Cultural Resources	Cultural Resource Reports
Fontana,, Calif. (1980)	P-36-002910: National Old Trails Highway P-36-010658: Historic-Period Foundation P-36-010660: Hist.-Period Foundation/Refuse P-36-010909: Hist.-Period Foundation/Refuse P-36-015287: A.B. Miller Community Park P-36-015309: Boyle House P-36-015312: McGregor House P-36-015375: Fontana Women's Club House P-36-015377: Fontana Community Church P-36-015399: Fontana Company Tract Office	SB-00060, 02621, 03177, 04250, 04253, 04256, 04536, 05640, 05642, 06535, 06787, 06914, 07086, 07202, 07867, 08103, 08235

USGS Quad	Cultural Resources	Cultural Resource Reports
	P-36-015497: Base Line Road P-36-020337: Fontana Senior High School P-36-020649: Historic-Period Residence P-36-026708: Historic-Period Residence P-36-029863: Historic-Period Refuse P-36-029864: Historic-Period Foundation P-36-029865: Historic-Period Refuse	

BCR Consulting Staff Historian Dylan Williams reviewed San Bernardino County assessor records and aerial photos (www.historicaerials.com) to identify any historic-period (i.e. over 45 years old) buildings located the project sites. A total of 21 parcels contain buildings. Fifteen (15) historic-period residences were identified within 14 of the parcels, and the remaining seven parcels contain buildings that are not historic-period. The results of this review are summarized in Table B.

Table B. Buildings within Project Site

Assessor Parcel Number and Address	Status of Building(s) and Construction Date
APN: 019018109 – 16974 Malaga St	1 SFR, possibly 1 ancillary structure (shed) near north end of property; SB County build date: 1943
APN: 019018110 – 16982 Malaga St	1 SFR, 1 ancillary structure (not a garage) north of the SFR; SB County build date: 1927
APN: 019018111 – 16994 Malaga St	1 SFR, 1 detached garage structure; SB County build date: 1946
APN: 019018112 – 17002 Malaga St	1 SFR, 1 detached garage structure, possibly 1 additional ancillary structure immediately north of the garage; SB County build date: 1945
APN: 019018113 – 17012 Malaga St	1 SFR with attached (single) garage; SB County build date: 1925 (Effective year: 1946)
APN: 019018114 – 17022 Malaga St	1 SFR, 1 detached garage structure; SB County build date: 1989
APN: 019018126 – 17032 Malaga St	1 SFR; SB County build date: 1946 (Effective year: 1988)
APN: 019018125 – 17042 Malaga St	1 SFR; SB County build date: 1979 (Effective year: 1980)
APN: 019018124 – 17052 Malaga St	1 SFR, 1 ancillary structure behind the SFR; SB County build date: 1988
APN: 019018123 – 17062 Malaga St	1 SFR; SB County build date: 1979 (Effective year: 1980)
APN: 019018127 – 17070 Malaga St	1 SFR, possibly 1 ancillary structure (shed) north of the SFR; SB County build date: 1978
APN: 019018129 – 17080 Malaga St	1 SFR; SB County build date: 1979 (Effective year: 1982*)
APN: 019018128 – 7830 Mango Ave	1 SFR; SB County build date: 1979

Assessor Parcel Number and Address	Status of Building(s) and Construction Date
APN: 019018116 – 7808 Mango Ave	2 SFRs (SFR 1 and SFR 2), possibly 1 ancillary structure located immediately east of SFR 1; SB County build date for SFR 1: 1930; SB County build date for SFR 2: 1927
APN: 019222107 – 8527 Palmetto Ave	1 SFR; SB County build date: 1936
APN: 019222106 – 8552 Palmetto Ave	1 SFR; SB County build date: 1923
APN: 019222106 – 8553 Palmetto Ave	1 SFR; SB County build date: 1946
APN: 019222144 – 8565 & 8567 Palmetto Ave	1 MFR; SB County build date not specified; historic aerial photographs indicate pre-1966 build date
APN: 019222144 – 8571 Palmetto Ave	1 SFR; SB County build date not specified; historic aerial photographs indicate pre-1953 build date
APN: 019222144 – 8573 Palmetto Ave	1 SFR; SB County build date not specified; historic aerial photographs indicate pre-1953 build date
APN: 019222132 – 8587 Palmetto Ave	1 Church building; SB County build date: 1958

SFR=Single Family Residence
MFR=Multiple Family Residence
SB=San Bernardino

Pedestrian Field Survey

BCR Consulting Staff Historian Dylan Williams conducted a reconnaissance mixed windshield and pedestrian inventory of the project sites on April 8, 2020. The windshield survey involved inspection of developed and landscaped portions of the project sites by vehicle. Where exposed soils were visible and access was permissible, the project site was inspected on foot at fifteen-meter transect intervals. All exposed soils were carefully inspected for cultural remains. 16982 Malaga Street, 17022 Malaga Street, 7808 Mango Avenue, and 8571 Palmetto Avenue were inaccessible and therefore not subject to pedestrian inventory. The remaining properties containing buildings were photographed (see Attachment B). The project site is highly disturbed by modern residential developments and landscaping.

Summary and Recommendations

As noted above, the project sites have not been subject to previous cultural resources assessment/inventory, and 15 historic-period architectural resources have been identified. Based on these results, for any proposed project that requires compliance with the California Environmental Quality Act (CEQA), BCR Consulting recommends a full cultural resource assessment, including a summary of the current records search, additional archival research, a cultural resources pedestrian inventory, Native American Consultation (as required by the lead agency), and completion of a cultural resources technical report. The assessment should be performed under the supervision of a cultural resource professional that meets the Secretary of the Interior's Professional Qualification Standards for Archaeology and for Architectural History. Historic-period buildings would require eligibility evaluations for listing in the California Register of Historical Resources (i.e. significance under CEQA). The following elements are required in historical evaluations:

- Site visit with photography of all exterior elevations and setting

- Location map (unless the property is on a small parcel easily located by address)
- Detailed property description including architectural description of building/s
- Land-use history of property (to uncover potential associations with historic events or persons)
- Local historic context (to provide a framework for evaluation)
- Evaluation of the property under California Register Significance criteria
- Integrity assessment

The Department of Park and Recreation (DPR) 523 form is the basic tool for CEQA evaluation as established by the California Office of Historic Preservation (OHP) March 1995 "Instructions for Recording Historical Resources." The minimum level of documentation for inclusion in the OHP archive is the Primary Record (first page of the DPR 523 form) and a location map. The Primary Record merely provides recordation without evaluation; a resource evaluation requires the Primary Record; Building, Structure, and Object Record; and Continuation Sheets.

If human remains are encountered during activities associated with the proposed project, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

Please contact me by phone at 909/525-7078 or e-mail at david.brunzell@yahoo.com with any questions or comments.

Sincerely,



David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachments: Project Exhibit, Photographic Documentation



Source:

K:\RIV_PLAN\094940115 - Fontana Sierra and Casa Grande EIR\Technical Studies\GIS\mxd\Replacement Sites.mxd

EXHIBIT 1: Replacement Sites
Sierra/Casa Grande

0 325 650
Feet

Kimley»Horn



Photo 1: First residence at 7808 Mango Avenue (built 1930); View – West



Photo 2: First residence at 7808 Mango Avenue (built 1930) with obscured view of the second residence on the property in the distance (built 1927); View – West



Photo 3: Residence at 7830 Mango Avenue (built 1979); View – Southwest



Photo 4: Residence at 17080 Malaga Street (built 1979); View – Northeast



Photo 5: Residence at 17070 Malaga Street (built 1978); View – Northeast.



Photo 6: Residence at 17062 Malaga Street (built 1980); View – North.



Photo 7: Residence at 17052 Malaga Street (built 1988); View – Northwest.



Photo 8: Residence at 17042 Malaga Street (built 1979); View – North.



Photo 9: Residence at 17032 Malaga Street (built 1946); View – Northwest.



Photo 10: Residence at 17022 Malaga Street (built 1989), not permitted to access for view of the residence; View – Northwest.



Photo 11: Residence at 17012 Malaga Street (built 1925); View – Northwest.



Photo 11: Residence at 17002 Malaga Street (built 1945); View – Northwest.



Photo 13: Residence at 16994 Malaga Street (built 1946); View – Northeast.



Photo 14: Residence at 16982 Malaga Street (built 1927), inaccessible; View – North.



Photo 15: Residence at 16974 Malaga Street (built 1943); View – Northwest.



Photo 16: Church building at 8587 Palmetto Avenue (built 1958); View – Northeast.



Photo 17: Residence at 8573 Palmetto Avenue (built pre-1953); View – Southeast.



Photo 17: Residences at 8565 and 8567 Palmetto Avenue (built pre-1966); View – Southeast.



Photo 18: Residence at 8553 Palmetto Avenue (built 1946); View – East.



Photo 19: Residence at 8552 Palmetto Avenue (built 1923); View – Southeast.



Photo 20: Residence at 8527 Palmetto Avenue (built 1936); View – Southeast.

Gabrieleno Band of Mission Indians – Kizh Nation

Protection of Tribal Cultural Resources (TCRs)

Most Important Things for Agencies to Know About AB52:

- An EIR, MND, or ND can not be certified until AB-52 tribal consultation has concluded.
- Agreed mitigation measures with the tribe, MUST be recommended for inclusion in the environmental document.
- Signature confirming acceptance of these mitigation measures recommended by our Tribal Government is required within 14 days of receipt to conclude AB52 consultation.

Tribal Cultural Resources Mitigation Measures within Kizh Nation Tribal Territory:

Note: To avoid compliance issues with the following laws, all Native American Monitoring shall be conducted by a documented lineal descendant from the ancestral Tribe of the project area (NAGPRA Law 10.14)

- The Native American Graves Protection and Repatriation Act (NAGPRA), Public Law-101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048.
- CEQA Guidelines Section15064.5, PRC 5097.98 (d)(1).
- The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

If you are receiving these measures, The Gabrieleño Band of Mission Indians Kizh -Nation are the direct lineal descendants of your project area. The Kizh Nation ONLY responds and consults on projects within their ANCESTRAL tribal territory. Therefore, to remain in compliance with above referenced laws and to enable our Tribe with the ability to protect and preserve our last remaining and irreplaceable Tribal Cultural Resources, it is recommended that the project applicant retain a qualified professional tribal monitor/consultant from the Gabrieleño Band of Mission Indians Kizh -Nation. The Kizh Nation possesses Tribal archives including documented historical information as well as multiple members who possess unique knowledge derived from oral tradition passed down through generations of the Tribe in order to provide the expertise needed to identify whether a project is located within a culturally sensitive area given its proximity to village areas, commerce areas, recreation areas, ceremonial areas, and burial locations.

Native American Heritage Commission (NAHC) Guidelines for Native American Monitors/Consultants (approved 9/13/05): By acting as a liaison between Native American, archaeologist, developers, contactors and public agency, a Native American monitor/consultant can ensure that cultural features are treated appropriately from the Native American point of view. This can help others involved in a project to coordinate mitigation measures. These guidelines are intended to provide prospective monitors/consultants, and people who hire monitors/consultants, with an understanding of the scope and extant of knowledge that should be expected.

Mitigation Guidelines for Tribal Cultural Resources (TCRs): CEQA now defines TCRs as an independent element separate from archaeological resources. Environmental documents shall address a separate Tribal Cultural Resources section that includes a thorough analysis of the impacts to only TCRs and includes separate and independent mitigation measures created with tribal input under AB-52 consultations. Therefore, all agreements, mitigation, and conditions of approval regarding TCRs shall be handled solely with the Tribal Government and conversely all agreements, mitigation, and conditions of approval regarding Archaeological Resources shall be handled by an Archaeological resource company.

MITIGATION MEASURES

Retain a Native American Monitor/Consultant: The Project Applicant shall be required to retain and compensate for the services of a Tribal monitor/consultant who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the area of the project location. This list is provided by the NAHC. The monitor/consultant will only be present on-site during the construction phases that involve ground disturbing activities. Ground disturbing activities are defined by the Gabrieleño Band of Mission Indians-Kizh Nation as activities that may include, but are not limited to, pavement removal, pot-holing or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching, within the project area. The Tribal Monitor/consultant will complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The on-site monitoring shall end when the project site grading and excavation activities are completed, or when the Tribal Representatives and monitor/consultant have indicated that the site has a low potential for impacting Tribal Cultural Resources.

Unanticipated Discovery of Tribal Cultural and Archaeological Resources: Upon discovery of any archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and tribal monitor/consultant approved by the Gabrieleño Band of Mission Indians-Kizh Nation. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the landowner regarding treatment and curation of these resources. Typically, the Tribe will request reburial or preservation for educational purposes. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section15064.5 [f]). If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and

Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Natural History Museum of Los Angeles County or the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to a local school or historical society in the area for educational purposes.

Unanticipated Discovery of Human Remains and Associated Funerary Objects:
Native American human remains are defined in PRC 5097.98 (d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) and PRC 5097.98 shall be followed.

Resource Assessment & Continuation of Work Protocol:

Upon discovery, the tribal and/or archaeological monitor/consultant/consultant will immediately divert work at minimum of 150 feet and place an exclusion zone around the burial. The monitor/consultant(s) will then notify the Tribe, the qualified lead archaeologist, and the construction manager who will call the coroner. Work will continue to be diverted while the coroner determines whether the remains are Native American. The discovery is to be kept confidential and secure to prevent any further disturbance. If the finds are determined to be Native American, the coroner will notify the NAHC as mandated by state law who will then appoint a Most Likely Descendent (MLD).

Kizh-Gabrieleno Procedures for burials and funerary remains:

If the Gabrieleno Band of Mission Indians – Kizh Nation is designated MLD, the following treatment measures shall be implemented. To the Tribe, the term "human remains" encompasses more than human bones. In ancient as well as historic times, Tribal Traditions included, but were not limited to, the burial of funerary objects with the deceased, and the ceremonial burning of human remains. These remains are to be treated in the same manner as bone fragments that remain intact. Associated funerary objects are objects that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later; other items made exclusively for burial purposes or to contain human remains can also be considered as associated funerary objects.

Treatment Measures:

Prior to the continuation of ground disturbing activities, the land owner shall arrange a designated site location within the footprint of the project for the respectful reburial of the human remains and/or ceremonial objects. In the case where discovered human remains cannot be fully documented and recovered on the same day, the remains will be covered with muslin cloth and a steel plate that can be moved by heavy equipment placed over the excavation opening to protect the remains. If this type of steel plate is not available, a 24-hour guard should be posted outside of working hours. The Tribe will make every effort to recommend diverting the project and keeping the remains in situ and protected. If the project cannot be diverted, it may be determined that burials will be removed. The Tribe will work closely with the qualified archaeologist to ensure that the excavation is treated carefully, ethically and respectfully. If data recovery is approved by the Tribe, documentation shall be taken which includes at a minimum detailed descriptive notes and sketches. Additional types of documentation shall be approved by the Tribe for data recovery purposes. Cremations will either be removed in bulk or by means as necessary to ensure completely recovery of all material. If the discovery of human remains includes four or more burials, the location is considered a cemetery and a separate treatment plan shall be created. Once complete, a final report of all activities is to be submitted to the Tribe and the NAHC. The Tribe does NOT authorize any scientific study or the utilization of any invasive diagnostics on human remains.

Each occurrence of human remains and associated funerary objects will be stored using opaque cloth bags. All human remains, funerary objects, sacred objects and objects of cultural patrimony will be removed to a secure container on site if possible. These items should be retained and reburied within six months of recovery. The site of reburial/repatriation shall be on the project site but at a location agreed upon between the Tribe and the landowner at a site to be protected in perpetuity. There shall be no publicity regarding any cultural materials recovered.

Professional Standards: Archaeological and Native American monitoring and excavation during construction projects will be consistent with current professional standards. All feasible care to avoid any unnecessary disturbance, physical modification, or separation of human remains and associated funerary objects shall be taken. Principal personnel must meet the Secretary of Interior standards for archaeology and have a minimum of 10 years of experience as a principal investigator working with Native American archaeological sites in southern California. The Qualified Archaeologist shall ensure that all other personnel are appropriately trained and qualified.

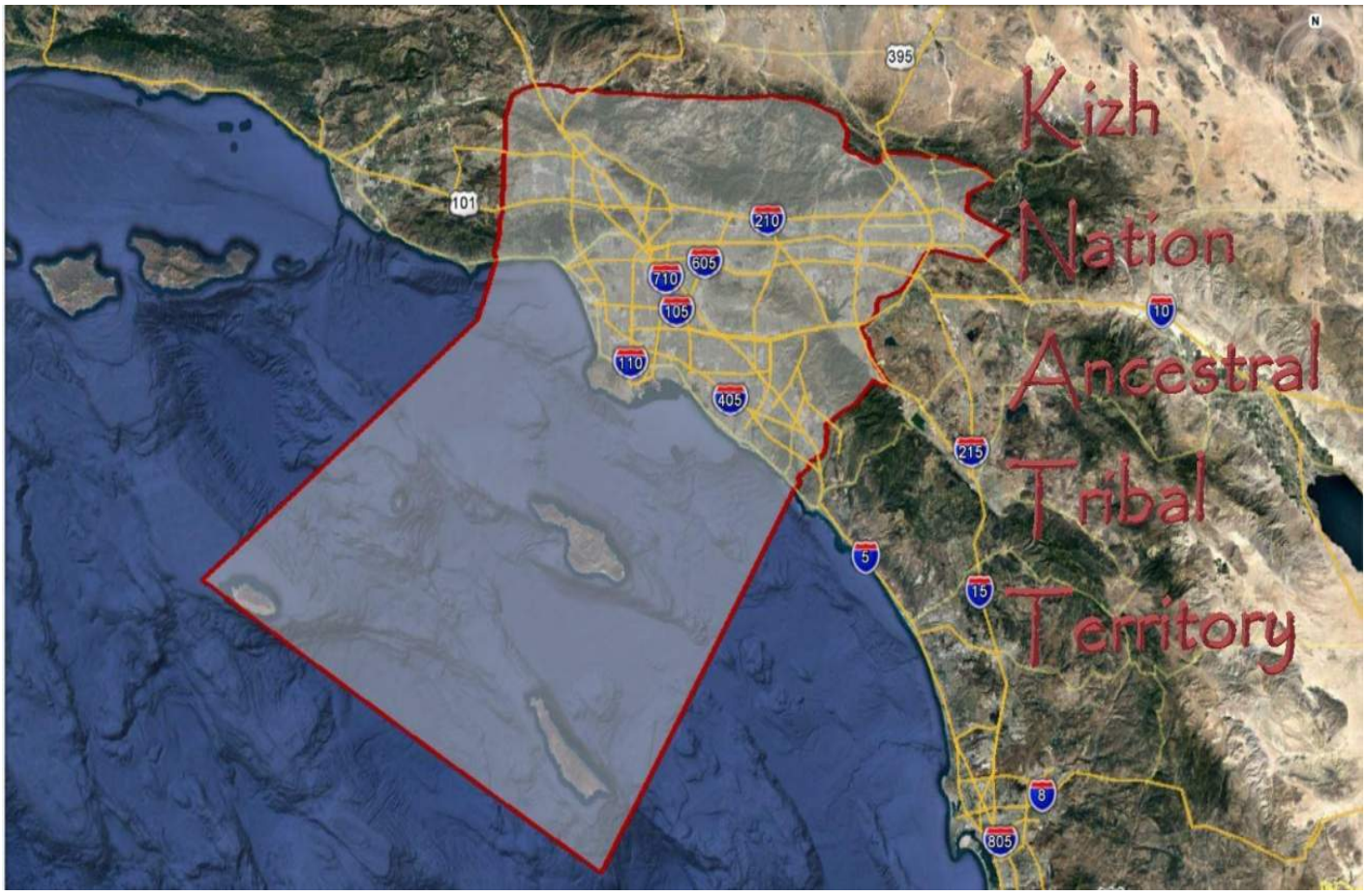
Acceptance of Tribal Government Recommended Mitigation Measures:

By _____ Date: _____
Lead Agency Representative Signature

Revised: August 2018

Attachment A

Kizh Nation Ancestral Tribal Territory extended along the coast from Malibu Creek in Los Angeles County down to Aliso Creek in Orange County and encompassed the Channel Islands of Catalina (Pimugna), San Nicolas (Haraasnga), and San Clemente (Kiinkenga). Our inland border was the San Gabriel Mountains (Hidakupa) and eastwardly our territory extended to parts of San Bernardino (Waatsngna), Orange, and Riverside counties.



Appendix E

Phase I Environmental Site Assessments

PARTNER
Engineering and Science, Inc.



PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Sierra Avenue, Fontana, CA
Vacant Land (APNs: 023915134 and 023915109)
Fontana, California 92336

Report Date: March 2, 2015
Partner Project No. 15-132494.2



Prepared for:

McDonald Property Group
450 Newport Center Drive, Suite 625
Newport Beach, California 92660

PARTNER
Engineering and Science, Inc.

March 2, 2015

Mr. Bruce McDonald
McDonald Property Group
450 Newport Center Drive, Suite 625
Newport Beach, California 92660

Subject: Phase I Environmental Site Assessment
Sierra Avenue, Fontana, CA
Vacant Land (0239-151-34-0000 and 0239-151-09-0000)
Fontana, California 92336
Partner Project No. 15-132494.2

Dear Mr. McDonald:

Partner Engineering and Science, Inc. (Partner) is pleased to provide the results of the *Phase I Environmental Site Assessment* (Phase I ESA) report of the abovementioned address (the "subject property"). This assessment was performed in general conformance with the scope and limitations as detailed in the ASTM Practice E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

This assessment included a site reconnaissance as well as research and interviews with representatives of the public, property ownership, site manager, and regulatory agencies. An assessment was made, conclusions stated, and recommendations outlined.

We appreciate the opportunity to provide environmental services to you. If you have any questions concerning this report, or if we can assist you in any other matter, please contact me at (619) 757-1119 or MLambson@partneresi.com.

Sincerely,

Mark Lambson
Principal

EXECUTIVE SUMMARY

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in general accordance with the scope of work and limitations of ASTM Standard Practice E1527-13, the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) and set forth by McDonald Property Group for the Sierra Avenue property (0239-151-34-0000 and 0239-151-09-0000) located on the east side of Sierra Avenue in the City of Fontana, San Bernardino, California (the "subject property"). The Phase I Environmental Site Assessment is designed to provide McDonald Property Group with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property.

Property Description

The subject property is located on the east side of Sierra Avenue within a mixed undeveloped and residential area of San Bernardino County. Please refer to the table below for further description of the subject property:

Subject Property Data	
Address:	None (0239-151-34-0000); 5187 Sierra Avenue, Fontana, California 92336 (0239-151-09-0000)
Property Use:	Vacant land (0239-151-34-0000); single-family residence (0239-151-09-0000)
Land Acreage (Ac):	10.95 acres (0239-151-34-0000); 1.11 acres (0239-151-09-0000)
Number of Buildings:	None (0) (0239-151-34-0000); One (1) (0239-151-09-0000)
Number of Floors:	Not applicable (0239-151-34-0000); One (1) (0239-151-09-0000)
Gross Building Area (SF):	Not applicable (0239-151-34-0000); 1,157 SF (0239-151-09-0000)
Date of Construction:	Not applicable (0239-151-34-0000); 1959 (0239-151-09-0000)
Assessor's Parcel Numbers (APN):	0239-151-34-0000 (vacant land); 0239-151-09-0000 (single-family residence)
Type of Construction:	Wood-framed construction on a concrete slab on-grade foundation
Current Tenants:	Single-family residence
Site Assessment Performed By:	Nasim Ahmed of Partner
Site Assessment Conducted On:	February 24, 2015

The northwest corner of the subject property is currently occupied by a single-family residence, while the remaining portion of the subject property is currently undeveloped land covered with natural vegetation. The single-family residence at the subject property was not accessible by Partner during the site visit; therefore, Partner was not able to observe the interior of the building and conducted an exterior-only site reconnaissance.

According to available historical sources, the subject property was undeveloped as early as 1896 until circa 1959. The northwest corner of the subject property has been developed with a single-family residence from 1959 to the present.

The immediately surrounding properties consist of undeveloped land to the north, east, and south; and undeveloped land to the west across Sierra Avenue.

According to the Water Quality Monitoring report for Mid Valley Sanitary Landfill, located approximately 3,000 feet to the southeast of the subject property, groundwater in the vicinity of the subject property is present at approximately 300 to 400 feet below ground surface (bgs) and flow is toward the southeast.

Findings

A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- Partner did not identify any recognized environmental conditions during the course of this assessment.

A *controlled recognized environmental condition (CREC)* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *historical recognized environmental condition (HREC)* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- Partner did not identify any historical recognized environmental conditions during the course of this assessment.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- Partner observed several piles of dirt on the northeastern portion of the subject property. In addition, Partner observed a pile of concrete blocks, used automotive tires, and miscellaneous materials on the northeastern portion of the subject property. No staining and/or concerns were noted in the vicinity of these dirt, concrete block, abandoned automotive tire, and miscellaneous material piles. Based on the observed conditions, the concrete blocks, abandoned automotive tires, and miscellaneous materials are not expected to represent a significant environmental concern.

- Due to the age of the subject property building, there is a potential that asbestos-containing material (ACM) and/or lead-based paint (LBP) are present.

Conclusions, Opinions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of the Sierra Avenue property (0239-151-34-0000 and 0239-151-09-0000) located on the east side of Sierra Avenue in the City of Fontana, San Bernardino, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property; however, environmental issues were identified. Based on the conclusions of this assessment, Partner recommends the following:

- Partner recommends the removal and disposal of the piles of concrete blocks, abandoned automotive tires, and miscellaneous materials on the property's northeast portion in accordance with local environmental regulations.
- Should the subject property be redeveloped, pre-demolition ACM and LBP surveys should be conducted.

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1.0 INTRODUCTION

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in general conformance with the scope and limitations of ASTM Standard Practice E1527-13 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) for the Sierra Avenue property (0239-151-34-0000 and 0239-151-09-0000) located on the east side of Sierra Avenue in the City of Fontana, San Bernardino, California (the "subject property"). Any exceptions to, or deletions from, this scope of work are described in the report.

1.1 Purpose

The purpose of this ESA is to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E1527-13) affecting the subject property that: 1) constitute or result in a material violation or a potential material violation of any applicable environmental law; 2) impose any material constraints on the operation of the subject property or require a material change in the use thereof; 3) require clean-up, remedial action or other response with respect to Hazardous Substances or Petroleum Products on or affecting the subject property under any applicable environmental law; 4) may affect the value of the subject property; and 5) may require specific actions to be performed with regard to such conditions and circumstances. The information contained in the ESA Report will be used by Client to: 1) evaluate its legal and financial liabilities for transactions related to foreclosure, purchase, sale, loan origination, loan workout or seller financing; 2) evaluate the subject property's overall development potential, the associated market value and the impact of applicable laws that restrict financial and other types of assistance for the future development of the subject property; and/or 3) determine whether specific actions are required to be performed prior to the foreclosure, purchase, sale, loan origination, loan workout or seller financing of the subject property.

This ESA was performed to permit the *User* to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) liability (hereinafter, the "*landowner liability protections*," or "*LLPs*"). ASTM Standard E1527-13 constitutes "*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B).

1.2 Scope of Work

The scope of work for this ESA is in general accordance with the requirements of ASTM Standard E1527-13. This assessment included: 1) a property and adjacent site reconnaissance; 2) interviews with key personnel; 3) a review of historical sources; 4) a review of regulatory agency records; and 5) a review of a regulatory database report provided by a third-party vendor. Partner contacted local agencies, such as environmental health departments, fire departments and building departments in order to determine any current and/or former hazardous substances usage, storage and/or releases of hazardous substances on the subject property. Additionally, Partner researched information on the presence of activity and use limitations (AULs) at these agencies. As defined by ASTM E1527-13, AULs are the legal or physical restrictions or limitations on the use of, or access to, a site or facility: 1) to reduce or eliminate potential

exposure to hazardous substances or petroleum products in the soil or groundwater on the subject property; or 2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls (IC/ECs), are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or groundwater on the property.

If requested by Client, this report may also include the identification, discussion of, and/or limited sampling of asbestos-containing materials (ACMs), lead-based paint (LBP), mold, and/or radon.

1.3 Limitations

Partner warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the Scope of Work. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying recognized environmental conditions. There is a possibility that even with the proper application of these methodologies there may exist on the subject property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Partner believes that the information obtained from the record review and the interviews concerning the subject property is reliable. However, Partner cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the Client. No other warranties are implied or expressed.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This report is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Further, this report does not intend to address all of the safety concerns, if any, associated with the subject property.

Environmental concerns, which are beyond the scope of a Phase I ESA as defined by ASTM include the following: ACMs, LBP, radon, and lead in drinking water. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment; however, are considered non-scope issues. If specifically requested by the Client, these non-scope issues are discussed in Section 6.3.

1.4 User Reliance

McDonald Property Group engaged Partner to perform this assessment in accordance with an agreement governing the nature, scope and purpose of the work as well as other matters critical to the engagement. All reports, both verbal and written, are for the sole use and benefit of McDonald Property Group. Either

verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with Partner granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, Client and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such Use. Unauthorized use of this report shall constitute acceptance of and commitment to these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted. Additional legal penalties may apply.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted the Terms and Conditions for which this report was completed. A copy of Partner's standard Terms and Conditions can be found at http://www.partneresi.com/terms-and-conditions.php.

1.5 Limiting Conditions

The findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in ASTM E1527-13.

Specific limitations and exceptions to this ESA are more specifically set forth below:

- Interviews with past or current owners, operators, and occupants were not reasonably ascertainable and thus constitute a data gap. Based on information obtained from other historical sources (as discussed in Section 3.0), this data gap is not expected to alter the findings of this assessment.
- Partner requested information relative to deed restrictions and environmental liens, a title search, and completion of a pre-survey questionnaire from the Report User. This information was not provided at the time of the assessment.
- Partner submitted a Freedom of Information Act (FOIA) request to the San Bernardino County Fire Department for information pertaining to hazardous substances, underground storage tanks, releases, inspection records, etc. for the subject property. As of this writing, this agency has not responded to Partner's request. Based on information obtained from other historical sources, this limitation is not expected to alter the overall findings of this assessment.
- The single-family residence at the subject property was not accessible by Partner during the site visit; therefore, Partner was not able to observe the interior of the building and conducted an exterior-only site reconnaissance.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject property is located the east side of Sierra Avenue. According to the San Bernardino County Assessor, subject property ownership is currently vested in Sierra Avenue LLC since 2014 (0239-151-34-0000) and Donald and Kimber Lance since 1989 (0239-151-09-0000).

Please refer to Figure 1: Site Location Map, Figure 2: Site Plan, Figure 3: Topographic Map and Appendix A: Site Photographs for the location and site characteristics of the subject property.

2.2 Current Property Use

The northwest corner of the subject property is currently occupied by a single-family residence, while the remaining portion of the subject property is currently undeveloped land covered with natural vegetation.

The subject property is zoned R-5 and R-MU for single-family residential and regional-mixed use commercial development by the City of Fontana, respectively.

The subject property was not identified in the regulatory database report of Section 4.2.

2.3 Current Use of Adjacent Properties

The subject property is located within a mixed undeveloped and residential area of San Bernardino County. During the vicinity reconnaissance, Partner observed the following land use on properties in the immediate vicinity of the subject property:

Immediately Surrounding Properties

North: Undeveloped land
South: Undeveloped land
East: Undeveloped land
West: Sierra Avenue, beyond which is undeveloped land

No adjacent properties were identified in the regulatory database report of Section 4.2.

2.4 Physical Setting Sources

2.4.1 Topography

The United States Geological Survey (USGS) *Devore, California* Quadrangle 7.5-minute series topographic map was reviewed for this ESA. According to the contour lines on the topographic map, the subject property is located at approximately 1,760 feet above mean sea level (MSL). The contour lines in the area of the subject property indicate the area is sloping gently toward the south and southeast. No structures are depicted on the subject property on the 2012 map.

A copy of the most recent topographic map is included as Figure 3 of this report.

2.4.2 Hydrology

The nearest surface water in the vicinity of the subject property is Lytle Creek, located approximately 2 miles to the northeast of the subject property. No settling ponds, lagoons, surface impoundments,

wetlands, or natural catch basins were observed at the subject property during this assessment. According to available information, a public water system operated by the Fontana Water Company serves the subject property vicinity. The sources of public water for the Fontana Water Company are Lytle Creek and wells in the Lytle Basin, Rialto Basin, Chino Basin, and another ground water basin known as No Man's Land. A portion of the water supply is purchased from Cucamonga Valley Water District. Water from the State Water Project is purchased from the Inland Empire Utilities Agency and San Bernardino Valley Municipal Water District.

According to the Water Quality Monitoring report for Mid Valley Sanitary Landfill, located approximately 3,000 feet to the southeast of the subject property, groundwater in the vicinity of the subject property is present at approximately 300 to 400 feet below ground surface (bgs) and flow is toward the southeast.

2.4.3 Geology/Soils

The subject property is located in the Upper Santa Ana Valley, which is a broad down-warped area encompassing approximately 500 square miles. The Valley is bounded on the north by Transverse Ranges, on the south by the Jurupa Mountains and other ranges of the Perris Block and on the east and west by the San Jacinto Fault and the Chino Fault, respectively. Alluvium was deposited on the valley floor from the surrounding mountains. The alluvium in the Upper Santa Ana Valley consists of unconsolidated and semi-unconsolidated sediments that have been divided into Terrace Deposits and Older Alluvium of Late Pleistocene age and Younger Alluvium of Recent or Holocene age. The maximum thickness of the alluvium in the basin is approximately 1,400 feet. The Site occupies a position near the lower reaches of the alluvial fans that border the mountain front of the San Gabriel Range. Shallow underlying sediment has been deposited by stream issuing from the east Etiwanda, San Sevaine and Day Canyons, and by the smaller drainages that exist between them. These adjacent fans have coalesced and are referred to as an alluvial slope. The sediments, deeper in the subsurface, reflect deposition by fluvial processes, attributed to the ancestral Santa Ana River. Based on available data, the alluvium contains alternating sequences of coarse to fine-grained layers, which range in thickness from a dew feet to tens of feet. Thick intervals of fine-grained sand occur in the unsaturated zone and are intermixed with thin, probably discontinuous layers of silt or gravel. The saturated zone sediments are similar in character size to those found in the unsaturated zone with no widespread clay layers.

2.4.4 Flood Zone Information

Partner performed a review of the Flood Insurance Rate Map, published by the Federal Emergency Management Agency. According to Community Panel Number 06071C7920H, dated August 26, 2008, the subject property appears to be located in Unshaded Zone X, an area located outside of the 100-year and 500-year flood plains.

A copy of the reviewed flood map is not included in Appendix B of this report.

3.0 HISTORICAL INFORMATION

Partner obtained historical use information about the subject property from a variety of sources. A chronological listing of the historical data found is summarized in the table below:

Historical Use Information		
Period/Date	**Source**	**Description/Use**
1896-1959	Aerial Photographs, Topographic Maps	Undeveloped
1959-Present	Aerial Photographs, Onsite Observations, Topographic Maps	Residential; Undeveloped

No potential environmental concerns were identified in association with the current or former use of the subject property.

3.1 Aerial Photograph Review

Partner obtained available aerial photographs of the subject property and surrounding area from Environmental Data Resources (EDR). The following observations were noted to be visible on the subject property and adjacent properties during the aerial photograph review:

Date: 1938	*Scale: 1'=500"*
Subject Property:	Undeveloped
North:	Undeveloped
South:	Undeveloped
East:	Undeveloped
West:	Undeveloped across Sierra Avenue

Date: 1953	*Scale: 1'=500"*
Subject Property:	No significant changes noted
North:	No significant changes noted
South:	Developed with single-family residences
East:	No significant changes noted
West:	No significant changes noted

Date: 1966, 1975	*Scale: 1'=500"*
Subject Property:	The northwest corner appears to be developed with single-family residences while the remaining portion appears to be undeveloped land
North:	No significant changes noted
South:	Developed with a single family residence
East:	No significant changes noted
West:	No significant changes noted

Date: 1985, 1989	*Scale: 1'=500"*
Subject Property:	The northwest corner appears to be developed with a single-family residence while the remaining portion appears to be undeveloped land
North:	No significant changes noted

Date:	*1985, 1989*	*Scale:*	*1'=500"*
South:	No significant changes noted		
East:	No significant changes noted		
West:	No significant changes noted		

Date:	*1995*	*Scale:*	*1'=500"*
Subject Property:	No significant changes noted		
North:	No significant changes noted		
South:	No significant changes noted		
East:	Undeveloped land, followed by single-family residences		
West:	No significant changes noted		

Date:	*2005, 2009, 2010, 2012*	*Scale:*	*1'=500"*
Subject Property:	No significant changes noted		
North:	No significant changes noted		
South:	The previous single-family residence appears to have been removed; undeveloped land		
East:	No significant changes noted		
West:	No significant changes noted		

Copies of select aerial photographs are included in Appendix B of this report.

3.2 Fire Insurance Maps

Partner reviewed the collection of Sanborn Fire insurance maps from Environmental Data Resources (EDR). Sanborn map coverage was not available for the subject property.

3.3 City Directories

City Directories were not searched due to the residential and undeveloped nature of the subject property.

3.4 Historical Topographic Maps

Partner reviewed historical topographic maps obtained from NETR Online. The following observations were noted to be depicted on the subject property and adjacent properties during the topographic map review:

Date:	*1896, 1898, 1901, 1905, 1909, 1913, 1926, 1929, 1938, 1946*
Subject Property:	Undeveloped
North:	Undeveloped
South:	Undeveloped

Date:	***1896, 1898, 1901, 1905, 1909, 1913, 1926, 1929, 1938, 1946***
East:	Undeveloped
West:	Undeveloped across Sierra Avenue

Date:	***1955, 1959, 1960, 1965***
Subject Property:	Undeveloped desert land
North:	Undeveloped desert land
South:	Developed with a small structure
East:	Undeveloped desert land
West:	Undeveloped desert land across Sierra Avenue

Date:	***1968, 1974, 1980, 1988, 1999***
Subject Property:	The northwest corner of the property is depicted as developed with a small structure while the remaining portion of the property is depicted as undeveloped
North:	Undeveloped
South:	No significant changes depicted
East:	Undeveloped
West:	Undeveloped across Sierra Avenue

4.0 REGULATORY RECORDS REVIEW

4.1 Regulatory Agencies

4.1.1 Health Department

Regulatory Agency Data	
Name of Agency:	San Bernardino County Fire Department (SBCFD)
Point of Contact:	Ms. Maria [surname not given]
Agency Address:	620 South E Street, San Bernardino, CA 92415
Agency Phone Number:	(909) 385-8401
Date of Contact:	February 16, 2015
Method of Communication:	Faxed Request
Summary of Communication:	As of the date of this report, Partner has not received a response from the SBCFD for inclusion in this report.

4.1.2 Air Pollution Control Agency

Regulatory Agency Data	
Name of Agency:	Air Quality Management District (AQMD)
Point of Contact:	Not applicable
Agency Address:	21865 Copley Drive, Diamond Bar, CA 91765
Agency Phone Number:	(909) 396-3700
Date of Contact:	February 23, 2015
Method of Communication:	Online
Summary of Communication:	No Permits to Operate (PTO), Notices of Violation (NOV), or Notices to Comply (NTC) or the presence of AULs, dry cleaning machines, or USTs were on file for the subject property with the AQMD.

4.1.3 Regional Water Quality Agency

Regulatory Agency Data	
Name of Agency:	Regional Water Quality Control Board (RWQCB)
Point of Contact:	Not applicable
Agency Address:	3737 Main Street, Riverside, CA 92501
Agency Phone Number:	(951) 782-4499
Date of Contact:	February 23, 2015
Method of Communication:	Online
Summary of Communication:	No records regarding hazardous substance use, storage or releases, or the presence of USTs and AULs on the subject property were on file with the RWQCB.

4.1.4 Department of Toxic Substances Control

Regulatory Agency Data	
Name of Agency:	California Department of Toxic Substances Control (DTSC)
Point of Contact:	Not applicable
Agency Address:	5796 Corporate Avenue, Cypress, CA 90630
Agency Phone Number:	(714) 484-5300

Regulatory Agency Data	
Date of Contact:	February 23, 2015
Method of Communication:	Online
Summary of Communication:	No records regarding hazardous substance use, storage or releases, or the presence of USTs and AULs on the subject property were on file with the DTSC.

4.1.5 Building Department

Regulatory Agency Data	
Name of Agency:	Building & Safety Division, Fontana Community Development Department
Point of Contact:	Administrative Assistant
Agency Address:	8353 Sierra Avenue, Fontana, CA 92335
Agency Phone Number:	(909) 350-7640
Date of Contact:	February 24, 2015
Method of Communication:	In Person
Summary of Communication:	According to the records, the northwest portion of the subject property was developed with current single-family residence in 1959.

4.1.6 Planning Department

Regulatory Agency Data	
Name of Agency:	Planning Division, Fontana Community Development Department
Point of Contact:	Administrative Assistant
Agency Address:	8353 Sierra Avenue, Fontana, CA 92335
Agency Phone Number:	(909) 350-7640
Date of Contact:	February 24, 2015
Method of Communication:	In Person
Summary of Communication:	According to records reviewed, the subject property is zoned for residential (R5) and regional-mixed used (RMU) commercial development by the City of Fontana.

4.1.7 Oil & Gas Exploration

Regulatory Agency Data	
Name of Agency:	California Division of Oil, Gas, and Geothermal Resources (DOGGR)
Point of Contact:	Not applicable
Agency Address:	5816 Corporate Avenue, Cypress, CA 90630
Agency Phone Number:	(714) 816-6847
Date of Contact:	February 23, 2015
Method of Communication:	Online
Summary of Communication:	According to DOGGR, no oil or gas wells are located on or adjacent to the subject property.

4.1.8 Assessor's Office

Regulatory Agency Data	
Name of Agency:	San Bernardino County Assessor (SBCA)

Regulatory Agency Data	
Point of Contact:	Administrative Assistant
Agency Address:	172 W Third Street, San Bernardino, CA 92415
Agency Phone Number:	(909) 387-8307
Date of Contact:	February 23, 2015
Method of Communication:	Telephone and Online
Summary of Communication:	According to records reviewed, the subject property is identified by Assessor Parcel Numbers (APNs) 0239-151-34-0000 and 0239-151-09-0000 and is currently owned by Sierra Avenue LLC since 2014 (0239-151-34-0000) and Donald and Kimber Lance since 1989 (0239-151-09-0000.

4.2 Mapped Database Records Search

Information from standard federal, state, county, and city environmental record sources was provided by EDR. Data from governmental agency lists are updated and integrated into one database, which is updated as these data are released. The information contained in this report was compiled from publicly available sources and the locations of the sites are plotted utilizing a geographic information system, which geocodes the site addresses. The accuracy of the geocoded locations is approximately +/-300 feet.

Using the ASTM definition of migration, Partner considers the migration of hazardous substances or petroleum products in any form onto the subject property during the evaluation of each site listed on the radius report, which includes solid, liquid, and vapor.

4.2.1 Regulatory Database Summary

Radius Report Data

Database	Search Radius (mile)	Subject Property	Adjacent Properties	Sites of Concern
Federal NPL or Delisted NPL Site	1.00	N	N	N
Federal CERCLIS Site	0.50	N	N	N
Federal CERCLIS-NFRAP Site	0.50	N	N	N
Federal RCRA CORRACTS Facility	1.00	N	N	N
Federal RCRA TSDF Facility	0.50	N	N	N
Federal RCRA Generators Site (LQG, SQG, CESQG)	0.25	N	N	N
Federal IC/EC Registries	0.50	N	N	N
Federal ERNS Site	Subject Property	N	-	-
State/Tribal Equivalent NPL	1.00	N	N	N
State/Tribal Equivalent CERCLIS	1.00	N	N	N
State/Tribal Landfill/Solid Waste Disposal Site	0.50	N	N	N
State/Tribal Leaking Storage Tank Site	0.50	N	N	N
State/Tribal Registered Storage Tank Sites (UST/AST)	0.25	N	N	N
SLIC	0.50	N	N	N
State/Tribal Voluntary Cleanup Sites (VCP)	0.50	N	N	N
State/Tribal Spills	0.50	N	N	N

Radius Report Data				
Database	**Search Radius (mile)**	**Subject Property**	**Adjacent Properties**	**Sites of Concern**
Federal Brownfield Sites	0.50	N	N	N
State Brownfield Sites	0.50	N	N	N
EDR MGP	Varies	N	N	N
EDR US Hist Auto Station	Varies	N	N	N
EDR US Hist Cleaners	Varies	N	N	N

4.2.2 Subject Property Listings

The subject property is not identified in the regulatory database report.

4.2.3 Adjacent Property Listings

The adjacent properties are not identified in the regulatory database report.

4.2.4 Sites of Concern Listings

No sites of concern are identified in the regulatory database report.

Based on the findings, vapor migration is not expected to represent a significant environmental concern at this time.

4.2.5 Orphan Listings

No orphan listings are identified in the regulatory database report.

A copy of the regulatory database report is included in Appendix C of this report.

5.0 USER PROVIDED INFORMATION AND INTERVIEWS

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *User* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. The *User* should provide the following information to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiries* is not complete. The *User* is asked to provide information or knowledge of the following:

- Review Title and Judicial Records for Environmental Liens and AULs
- Specialized Knowledge or Experience of the User
- Actual Knowledge of the User
- Reason for Significantly Lower Purchase Price
- Commonly Known or *Reasonably Ascertainable* information
- Degree of Obviousness
- Reason for Preparation of this Phase I ESA

Fulfillment of these user responsibilities is key to qualification for the identified defenses to CERCLA liability. Partner requested our Client to provide information to satisfy User Responsibilities as identified in Section 6 of the ASTM guidance.

Pursuant to ASTM E1527-13, Partner requested the following site information from McDonald Property Group (User of this report).

User Responsibilities				
Item	**Provided By User**	**Not Provided By User**	**Discussed Below**	**Does Not Apply**
Environmental Pre-Survey Questionnaire			**X**	
Title Records, Environmental Liens, and AULs			**X**	
Specialized Knowledge			**X**	
Actual Knowledge			**X**	
Valuation Reduction for Environmental Issues			**X**	
Identification of Key Site Manager	**Section 5.1.3**			
Reason for Performing Phase I ESA	**Section 1.1**			
Prior Environmental Reports		**X**		
Other				**X**

5.1 Interviews

5.1.1 Interview with Owner

The owner of the subject property was not available to be interviewed at the time of the assessment.

5.1.2 Interview with Report User

Please refer to Section 5.2 below for information requested from the Report User. The information requested was not received prior to the issuance of this report. Because the Report User (Client) is a lender, it is understood that the Report User would not have knowledge of the property that would significantly impact our ability to satisfy the objectives of this assessment. The lack of this information is not considered to represent a significant data gap.

5.1.3 Interview with Key Site Manager

A key site manager was not provided to be interviewed at the time of this assessment.

5.1.4 Interviews with Past Owners, Operators, and Occupants

Interviews with past owners, operators, and occupants were not conducted since information regarding the potential for contamination at the subject property was obtained from other sources.

5.1.5 Interview with Others

As the subject property is not an abandoned property as defined in ASTM 1527-13, interview with others were not performed.

5.2 User Provided Information

5.2.1 Title Records, Environmental Liens, and AULs

Partner was not provided with title records or environmental lien and AUL information for review as part of this assessment.

5.2.2 Specialized Knowledge

No specialized knowledge of environmental conditions associated with the subject property was provided by the User at the time of the assessment.

5.2.3 Actual Knowledge of the User

No actual knowledge of any environmental lien or AULs encumbering the subject property or in connection with the subject property was provided by the User at the time of the assessment.

5.2.4 Valuation Reduction for Environmental Issues

No knowledge of valuation reductions associated with the subject property was provided by the User at the time of the assessment.

5.2.5 Commonly Known or Reasonably Ascertainable Information

The User did not provide information that is commonly known or *reasonably ascertainable* within the local community about the subject property at the time of the assessment.

5.2.6 Previous Reports and Other Provided Documentation

No previous reports or other pertinent documentation was provided to Partner for review during the course of this assessment.

6.0 SITE RECONNAISSANCE

The weather at the time of the site visit was sunny and clear. Refer to Section 1.5 for limitations encountered during the field reconnaissance and Sections 2.1 and 2.2 for subject property operations. The table below provides the site assessment details:

Site Assessment Data	
Site Assessment Performed By:	Nasim Ahmed
Site Assessment Conducted On:	February 24, 2015

Partner was unaccompanied during the site reconnaissance. The single-family residence at the subject property was not accessible by Partner during the site visit; therefore, Partner was not able to observe the interior of the building and conducted an exterior-only site reconnaissance. No potential environmental concerns were identified during the onsite reconnaissance.

6.1 General Site Characteristics

6.1.1 Solid Waste Disposal

No solid waste is currently generated or collected on the subject property.

Partner observed several piles of dirt on the northeastern portion of the subject property. In addition, Partner observed a pile of concrete blocks, used automotive tires, and miscellaneous materials on the northeastern portion of the subject property. No staining and/or concerns were noted in the vicinity of these dirt, concrete block, abandoned automotive tire, and miscellaneous material piles. Based on the observed conditions, the concrete blocks, abandoned automotive tires, and miscellaneous materials are not expected to represent a significant environmental concern. Partner recommends the removal and disposal of these dumped items in accordance with local environmental regulations.

6.1.2 Sewage Discharge and Disposal

Partner was not granted access to the interior of the single family residence and therefore assessment for sewage discharge was not performed.

6.1.3 Surface Water Drainage

Storm water runoff from the subject property percolates into the surface through natural attenuation.

The subject property does not appear to be a designated wetland area, based on information obtained from the United States Fish & Wildlife Service; however, a comprehensive wetlands survey would be required in order to formally determine actual wetlands on the subject property. No surface impoundments, wetlands, natural catch basins, settling ponds, or lagoons are located on the subject property. No drywells were identified on the subject property.

6.1.4 Source of Heating and Cooling

Partner was not granted access to the interior of the single-family residence and therefore assessment for heating and cooling systems were not performed.

6.1.5 Wells and Cisterns

No aboveground evidence of wells or cisterns was observed during the site reconnaissance.

6.1.6 Wastewater

No industrial process is currently performed at the subject property.

6.1.7 Septic Systems

Partner was not granted access to the interior of the single family residence and therefore assessment for septic system was not performed.

6.1.8 Additional Site Observations

No additional general site characteristics were observed during the site reconnaissance.

6.2 Potential Environmental Hazards

6.2.1 Hazardous Substances and Petroleum Products Used or Stored at the Site

No hazardous substances or petroleum products were observed on the subject property during the site reconnaissance.

6.2.2 Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)

No evidence of current or former ASTs or USTs was observed during the site reconnaissance.

6.2.3 Evidence of Releases

No spills, stains, or other indications that a surficial release has occurred at the subject property were observed.

6.2.4 Polychlorinated Biphenyls (PCBs)

Older transformers and other electrical equipment could contain PCBs at a level that subjects them to regulation by the U.S. EPA. PCBs in electrical equipment are controlled by United States Environmental Protection Agency regulations 40 CFR, Part 761. Under the regulations, there are three categories into which electrical equipment can be classified: 1) Less than 50 parts per million (ppm) of PCBs – "*Non-PCB;*" 2) 50 ppm-500 ppm – "*PCB-Contaminated;*" and, 3) Greater than 500 ppm – "*PCB-Containing.*" The manufacture, process, or distribution in commerce or use of any PCB in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

The on-site reconnaissance addressed indoor and outdoor transformers that may contain PCBs. At least three pole-mounted transformers were observed on the subject property. The transformers are not labeled indicating PCB content. No staining or leakage was observed in the vicinity of the transformers. Partner contacted a customer service representative of Southern California Edison, who confirmed that Southern California Edison maintains ownership and operational responsibility for the transformers and that the units do not contain PCBs. Based on the good condition of the equipment, the transformers are not expected to represent a significant environmental concern.

Additionally, no other potential PCB-containing equipment (interior transformers, oil-filled switches, hoists, lifts, dock levelers, hydraulic elevators, balers, etc.) was observed on the subject property during Partner's reconnaissance.

6.2.5 Strong, Pungent, or Noxious Odors

No strong, pungent, or noxious odors were evident during the site reconnaissance.

6.2.6 Pools of Liquid

No pools of liquid were observed on the subject property during the site reconnaissance.

6.2.7 Drains, Sumps, and Clarifiers

No drains, sumps, or clarifiers, other than those associated with storm water removal, were observed on the subject property during the site reconnaissance.

6.2.8 Pits, Ponds, and Lagoons

No pits, ponds, or lagoons were observed on the subject property.

6.2.9 Stressed Vegetation

No stressed vegetation was observed on the subject property.

6.2.10 Additional Potential Environmental Hazards

No additional environmental hazards, including landfill activities or radiological hazards, were observed.

6.3 Non-ASTM Services

6.3.1 Asbestos-Containing Materials (ACMs)

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 requires certain construction materials to be *presumed* to contain asbestos, for purposes of this regulation. All thermal system insulation (TSI), surfacing material, and asphalt/vinyl flooring that are present in a building constructed prior to 1981 and have not been appropriately tested are "presumed asbestos-containing material" (PACM).

The subject property building was constructed in 1959. Partner was not granted access to the interior of the single family residence and therefore assessment for suspect asbestos containing materials was not performed.

6.3.2 Lead-Based Paint (LBP)

Lead is a highly toxic metal that affects virtually every system of the body. LBP is defined as any paint, varnish, stain, or other applied coating that has 1 mg/cm^2 (or 5,000 ug/g or 0.5% by weight) or more of lead. Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as "Title X", to protect families from exposure to lead from paint, dust, and soil. Under Section 1017 of Title X, intact LBP on most walls and ceilings is not considered a "hazard," although the condition of the paint

should be monitored and maintained to ensure that it does not become deteriorated. Further, Section 1018 of this law directed the Housing and Urban Development (HUD) and the US EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978.

The subject property building was constructed in 1959. Partner was not granted access to the interior of the single family residence and therefore assessment for lead-based paint was not performed.

6.3.3 Radon

Radon is a colorless, odorless, naturally occurring, radioactive, inert, gaseous element formed by radioactive decay of radium (Ra) atoms. The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, according to the table below:

EPA Radon Zones		
EPA Zones	**Average Predicted Radon Levels**	**Potential**
Zone 1	Exceed 4.0 pCi/L	Highest
Zone 2	Between 2.0 and 4.0 pCi/L	Moderate
Zone 3	Less than 2.0 pCi/L	Low

It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the US EPA recommends site-specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not conducted as part of this assessment. Review of the US EPA Map of Radon Zones places the subject property in Zone 2. Based upon the radon zone classification, radon is not considered to be a significant environmental concern.

6.3.4 Lead in Drinking Water

According to available information, a public water system operated by the Fontana Water Company serves the subject property vicinity. The sources of public water for the Fontana Water Company are Lytle Creek surface flow, and from wells in the Lytle Basin, Rialto Basin, Chino Basin, and another ground water basin known as No Man's Land. A portion of the water supply is purchased from Cucamonga Valley Water District. Water from the State Water Project is purchased from the Inland Empire Utilities Agency and San Bernardino Valley Municipal Water District. According to the 2013 Annual Water Quality Report, water supplied to the subject property is in compliance with all State and Federal regulations pertaining to drinking water standards, including lead and copper.

6.3.5 Mold

Molds are microscopic organisms found virtually everywhere, indoors and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g.in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding).

Partner observed accessible, interior areas for the subject property building for significant evidence of mold growth with the exceptions detailed in Section 1.5 of this report; however, this ESA should not be used as a mold survey or inspection. Additionally, this limited assessment was not designed to assess all areas of potential mold growth that may be affected by mold growth on the subject property. Rather, it is intended to give the client an indication as to whether or not conspicuous (based on observed areas) mold growth is present at the subject property. This evaluation did not include a review of pipe chases, mechanical systems, or areas behind enclosed walls and ceilings.

Partner was not granted access to the interior of the single family residence and therefore assessment for mold was not performed.

6.4 Adjacent Property Reconnaissance

The adjacent property reconnaissance consisted of observing the adjacent properties from the subject property premises. No items of environmental concern were identified on the adjacent properties during the site assessment, including hazardous substances, petroleum products, ASTs, USTs, evidence of releases, PCBs, strong or noxious odors, pools of liquids, sumps or clarifiers, pits or lagoons, stressed vegetation, or any other potential environmental hazards.

7.0 FINDINGS AND CONCLUSIONS

Findings

A *REC* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- Partner did not identify any recognized environmental conditions during the course of this assessment.

A *CREC* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *HREC* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- Partner did not identify any historical recognized environmental conditions during the course of this assessment.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- Partner observed several piles of dirt on the northeastern portion of the subject property. In addition, Partner observed a pile of concrete blocks, used automotive tires, and miscellaneous materials on the northeastern portion of the subject property. No staining and/or concerns were noted in the vicinity of these dirt, concrete block, abandoned automotive tire, and miscellaneous material piles. Based on the observed conditions, the concrete blocks, abandoned automotive tires, and miscellaneous materials are not expected to represent a significant environmental concern.
- Due to the age of the subject property building, there is a potential that asbestos-containing material (ACM) and/or lead-based paint (LBP) are present.

Conclusions, Opinions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of Sierra Avenue property (0239-151-34-0000 and 0239-151-09-

0000) located on the east side of Sierra Avenue in the City of Fontana, San Bernardino, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property; however, environmental issues were identified. Based on the conclusions of this assessment, Partner recommends the following:

- Partner recommends the removal and disposal of the piles of concrete blocks, abandoned automotive tires, and miscellaneous materials on the property's northeast portion in accordance with local environmental regulations.
- Should the subject property be redeveloped, pre-demolition ACM and LBP surveys should be conducted.

8.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Partner has performed a Phase I Environmental Site Assessment of the Sierra Avenue property (0239-151-34-0000 and 0239-151-09-0000) located on the east side of Sierra Avenue in the City of Fontana, San Bernardino, California in general conformance with the scope and limitations of the protocol and the limitations stated earlier in this report. Exceptions to or deletions from this protocol are discussed earlier in this report.

By signing below, Partner declares that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR §312. Partner has the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. Partner has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared By:



Nasim Ahmed, REPA
Environmental Professional

Reviewed By:



Shawn Askew
Senior Author

9.0 REFERENCES

Reference Documents

American Society for Testing and Materials, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation: E1527-13.

Environmental Data Resources (EDR), Radius Report, February 2015.

Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program, Community Panel Number 06071C7920H, dated August 26, 2008, accessed via internet, February 2015.

United States Department of Agriculture, Natural Resources Conservation Service, accessed via internet, February 2015.

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, accessed via the internet, February 2015.

United States Environmental Protection Agency, EPA Map of Radon Zones (Document EPA-402-R-93-071), accessed via the internet, February 2015.

United States Geological Survey, accessed via the Internet, February 2015.

United States Geological Survey Topographic Map 2012, 7.5 minute series, Devore, San Bernardino County, California, scale 1:24,000, U.S. Geological Survey, accessed via Internet, February 2015.

FIGURES

1 SITE LOCATION MAP

2 SITE PLAN

3 TOPOGRAPHIC MAP

PARTNER

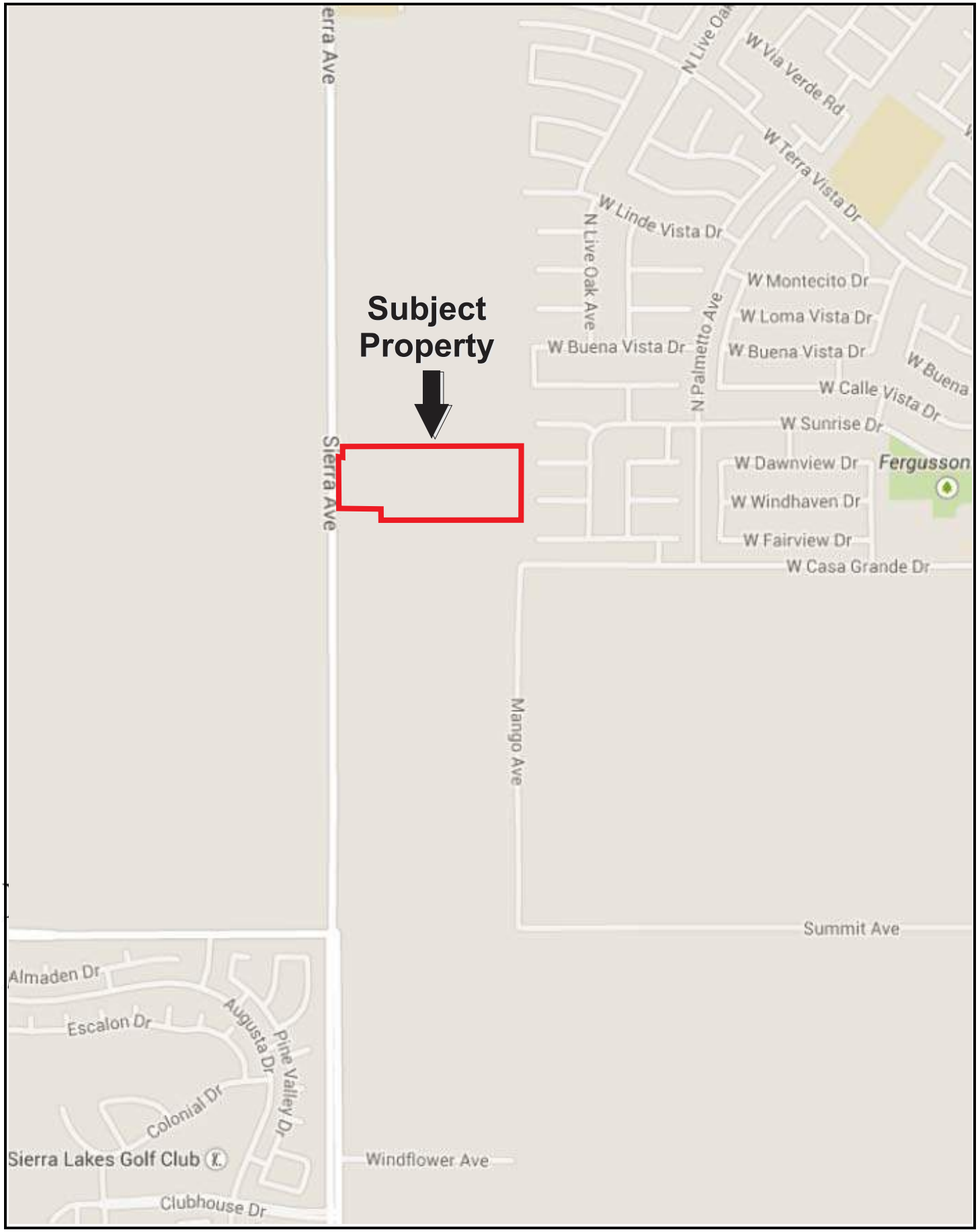


FIGURE 1: SITE LOCATION MAP
Project No. 15-132494.2

Drawing Not To Scale

PARTNER



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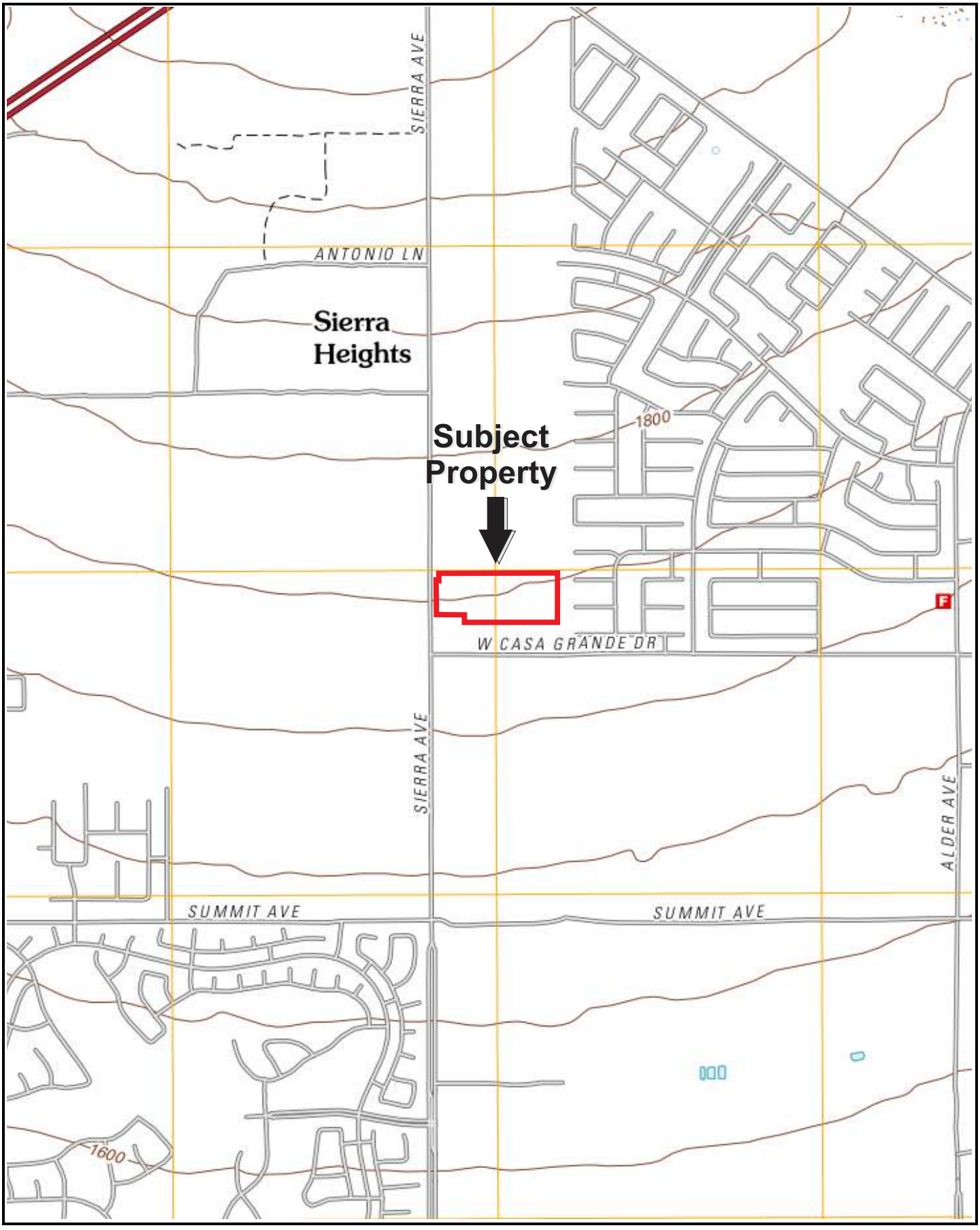
GROUNDWATER FLOW

KEY:

Subject Site

FIGURE 2: SITE PLAN
Project No. 15-132494.2

PARTNER



USGS 7.5 Minute *Devore, California* Quadrangle Created: 2012

FIGURE 3: TOPOGRAPHIC MAP
Project No. 15-132494.2

PARTNER

APPENDIX A: SITE PHOTOGRAPHS



1. View of the subject property taken from the northwest



2. View of the subject property taken from the west



3. View of the subject property taken from the southwest



4. View of the subject property



5. View of the subject property



6. View of the subject property



7. View of the subject property



8. View of the subject property



9. View of the subject property



10. View of the subject property



11. View of the subject property



12. View of the subject property



13. View of the subject property



14. View of single family residence on the northwest corner



15. View of single family residence on northwest corner



16. View of concrete blocks



17. View of concrete blocks and used automotive tires



18. View of dirt piles



19. View of dirt piles



20. View of dirt piles



21. View of undeveloped land to the north



22. View of undeveloped land to the south



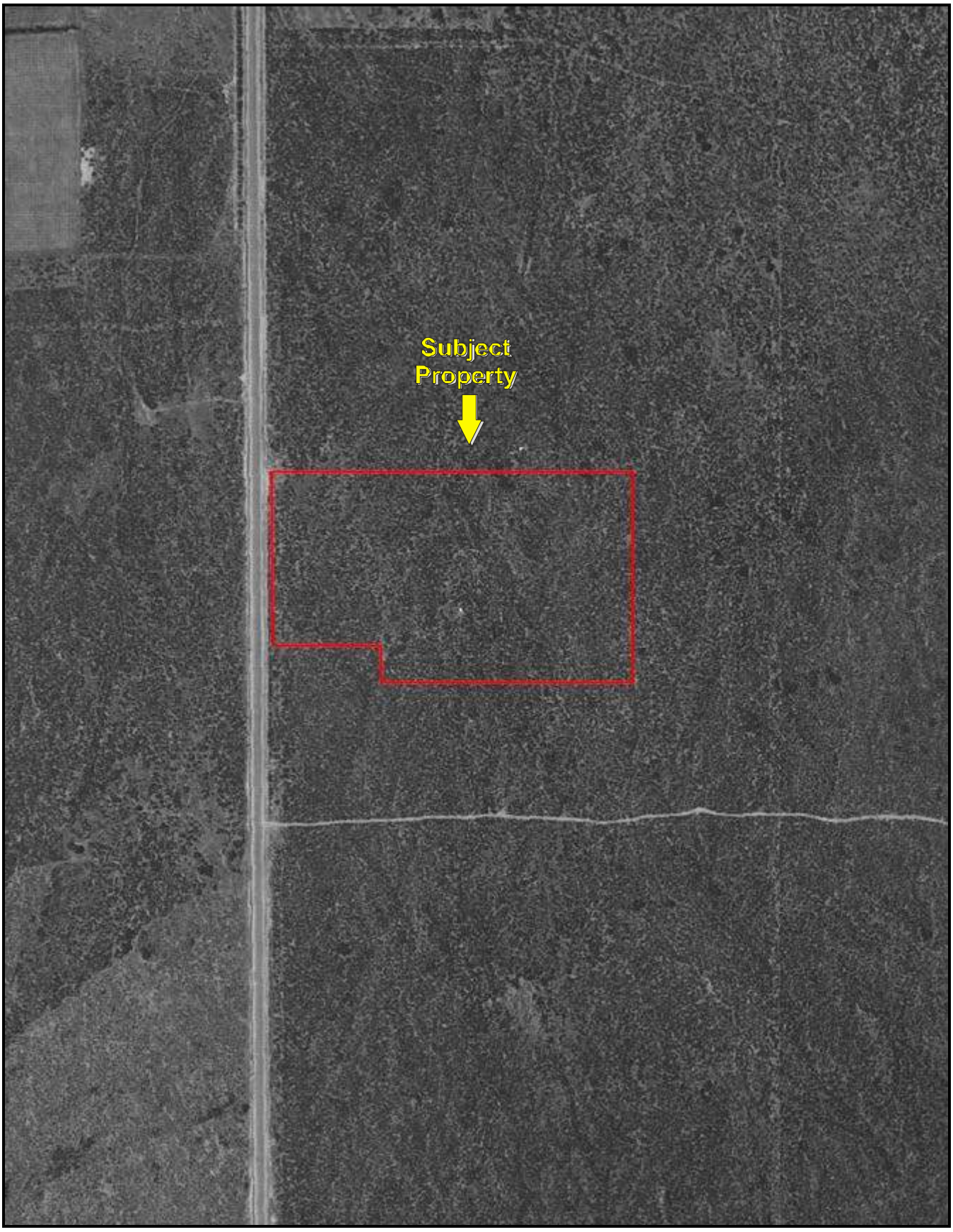
23. View of undeveloped land and single-family residences to the east



24. View of undeveloped land to the west across Sierra Avenue

APPENDIX B: HISTORICAL/REGULATORY DOCUMENTATION

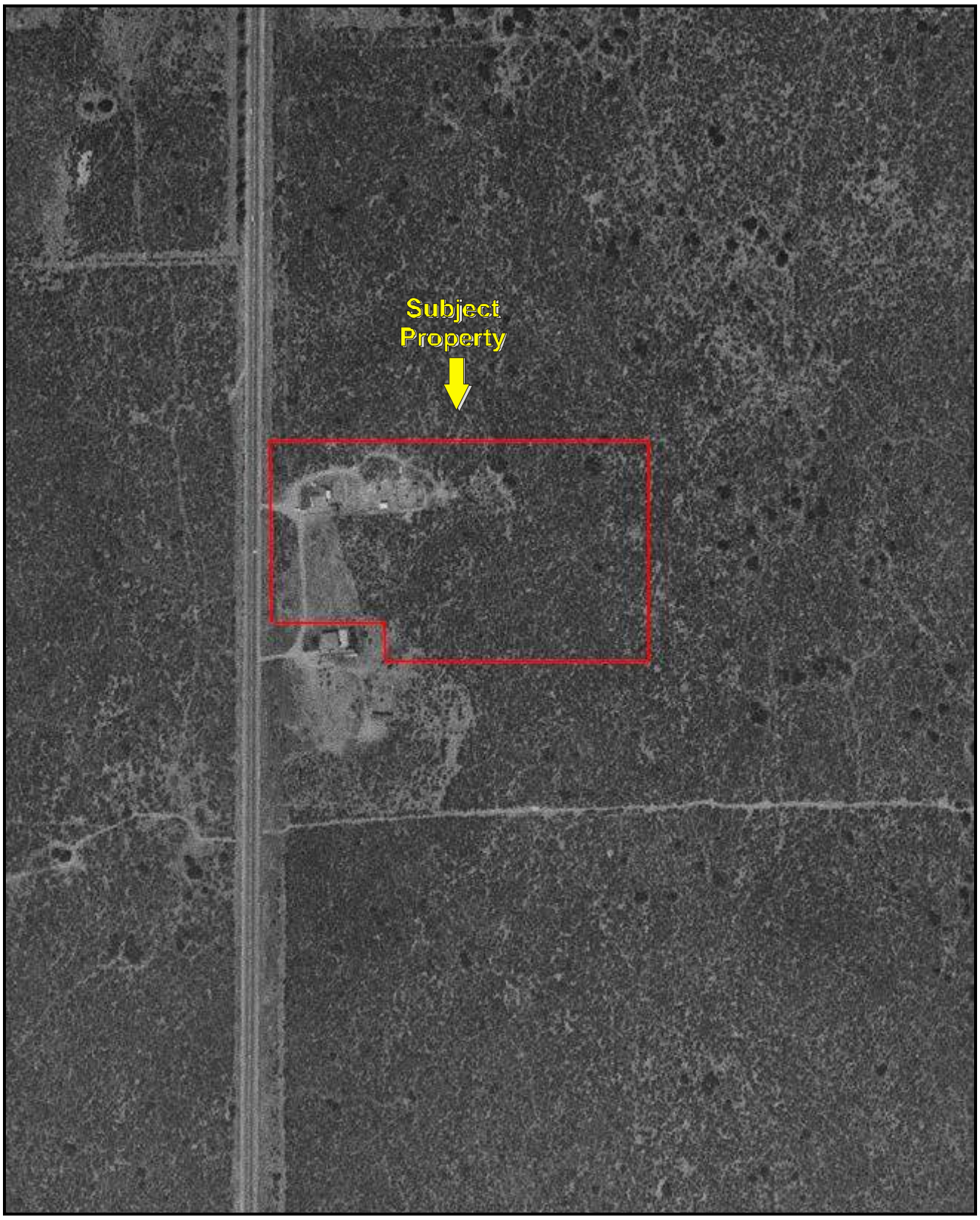
PARTNER



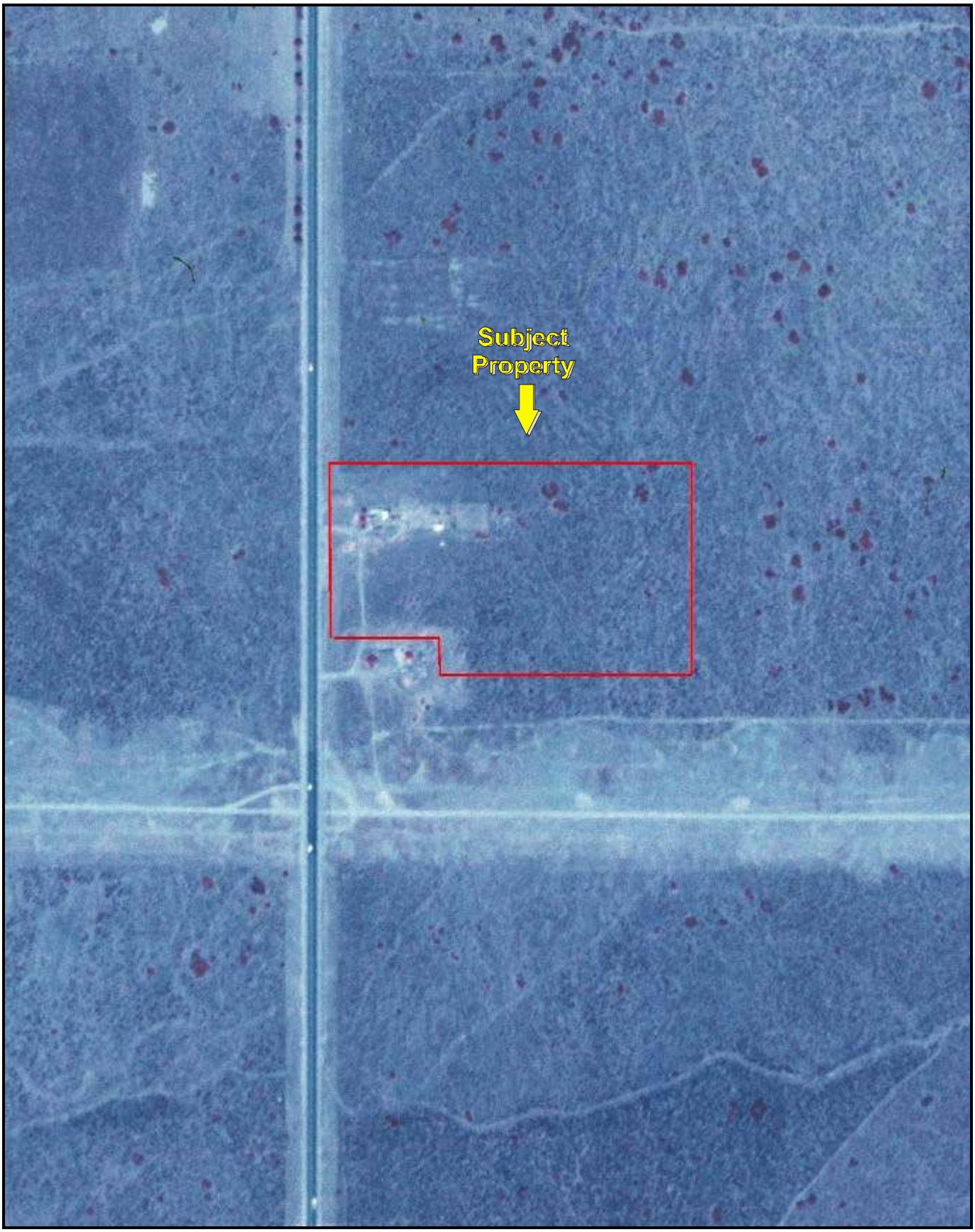
Date of Photograph: 1938



Date of Photograph: 1953



Date of Photograph: 1966



Date of Photograph: 1975



Date of Photograph: 1985



Date of Photograph: 1989



Date of Photograph: 1995



Date of Photograph: 2005



Date of Photograph: 2009



Date of Photograph: 2012

Sierra Avenue, Fontana, CA San Bernardino County
Sierra Avenue
Rialto, CA 92377

Inquiry Number: 4203629.3
February 10, 2015

Certified Sanborn® Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

2/10/15

Site Name:
Sierra Avenue, Fontana, CA
Sierra Avenue
Rialto, CA 92377

Client Name:
Partner Engineering and
2154 Torrance Blvd, Suite 200
Torrance, CA 90501-0000

EDR Inquiry # 4203629.3

Contact: Francesca Nguyen

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Partner Engineering and Science, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Site Name: Sierra Avenue, Fontana, CA San Bernardino
Address: Sierra Avenue
City, State, Zip: Rialto, CA 92377
Cross Street:
P.O. # NA
Project: 15-132494.2
Certification # 9287-4DAC-9B30

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results
Certification # 9287-4DAC-9B30

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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U.S. Fish and Wildlife Service
National Wetlands Inventory

Mar 2, 2015

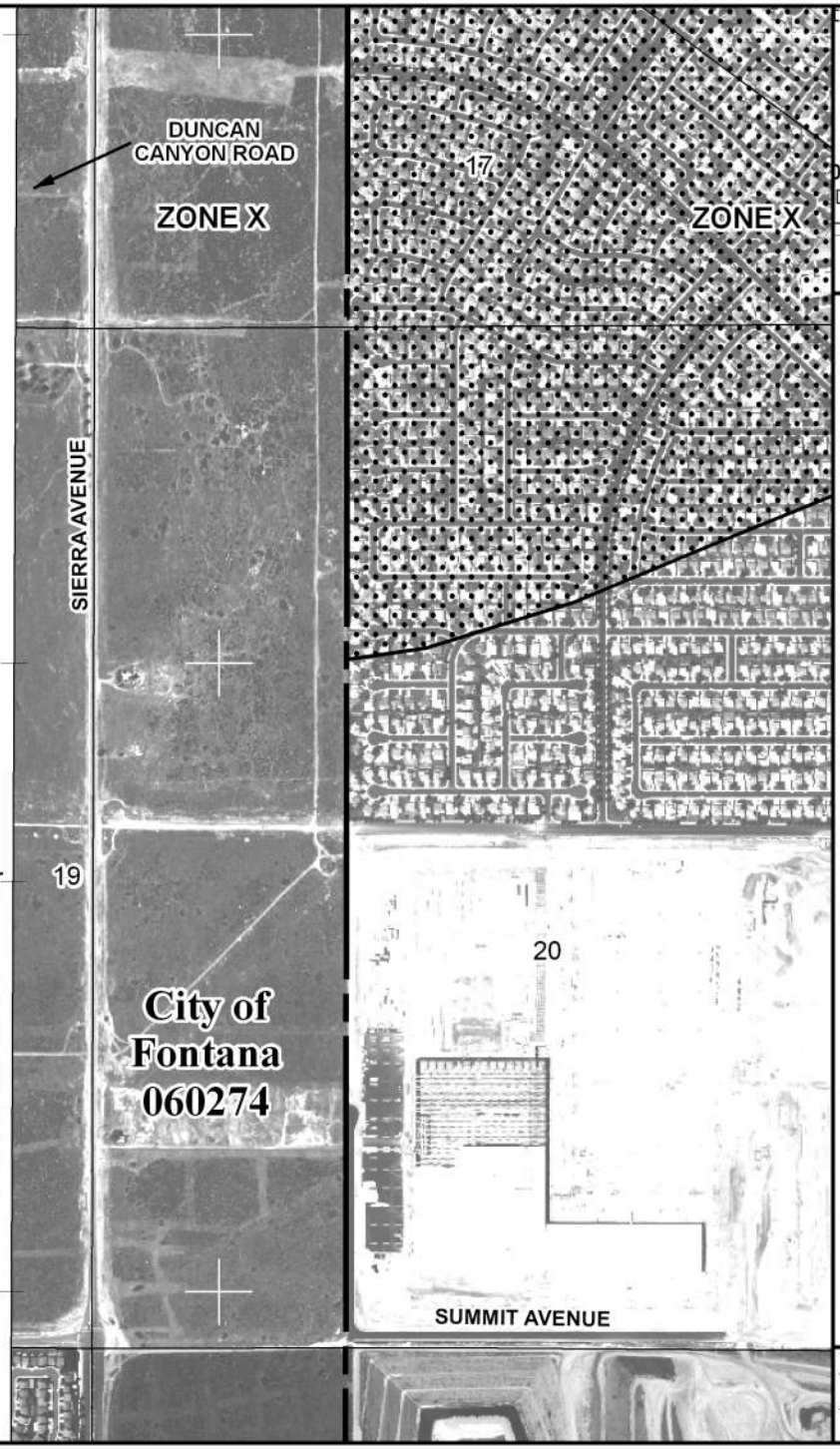


Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:



tional Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

0 0 1000 2000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 7920H

FIRM

FLOOD INSURANCE RATE MAP

SAN BERNARDINO COUNTY, CALIFORNIA
AND INCORPORATED AREAS
PANEL 7920 OF 9400

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FONTANA, CITY OF	060274	7920	H
RIALTO, CITY OF	060280	7920	H
SAN BERNARDINO COUNTY	060270	7920	H
SAN BERNARDINO, CITY OF	060281	7920	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06071C7920H

MAP REVISED
AUGUST 28, 2008

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

APPENDIX C: REGULATORY DATABASE REPORT

PARTNER

Sierra Avenue, Fontana, CA San Bernardino County
Sierra Avenue
Rialto, CA 92377

Inquiry Number: 4203629.2s
February 10, 2015

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	22
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

SIERRA AVENUE
SAN BERNARDINO County, CA 92377

COORDINATES

Latitude (North):	34.1595000 - 34° 9' 34.20''
Longitude (West):	117.4355000 - 117° 26' 7.80''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	459856.8
UTM Y (Meters):	3779732.0
Elevation:	1762 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	34117-B4 DEVORE, CA
Most Recent Revision:	1988

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120429
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL---------- Proposed National Priority List Sites

EXECUTIVE SUMMARY

NPL LIENS ---- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---- Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP ---- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---- RCRA - Large Quantity Generators
RCRA-SQG ---- RCRA - Small Quantity Generators
RCRA-CESQG ---- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---- Engineering Controls Sites List
US INST CONTROL ---- Sites with Institutional Controls
LUCIS ---- Land Use Control Information System

Federal ERNS list

ERNS ---- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---- EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---- Solid Waste Information System

State and tribal leaking storage tank lists

LUST ---- Geotracker's Leaking Underground Fuel Tank Report
SLIC ---- Statewide SLIC Cases

INDIAN LUST - Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST - Active UST Facilities
AST - Aboveground Petroleum Storage Tank Facilities
INDIAN UST - Underground Storage Tanks on Indian Land
FEMA UST - Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP - Voluntary Cleanup Priority Listing
VCP - Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS - A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI - Open Dump Inventory
DEBRIS REGION 9 - Torres Martinez Reservation Illegal Dump Site Locations
SWRCY - Recycler Database
HAULERS - Registered Waste Tire Haulers Listing
INDIAN ODI - Report on the Status of Open Dumps on Indian Lands
WMUDS/SWAT - Waste Management Unit Database

Local Lists of Hazardous waste / Contaminated Sites

US CDL - Clandestine Drug Labs
HIST Cal-Sites - Historical Calsites Database
SCH - School Property Evaluation Program
Toxic Pits - Toxic Pits Cleanup Act Sites
CDL - Clandestine Drug Labs
US HIST CDL - National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST - Facility Inventory Database
HIST UST - Hazardous Substance Storage Container Database
SWEEPS UST - SWEEPS UST Listing

Local Land Records

LIENS 2 - CERCLA Lien Information
LIENS - Environmental Liens Listing
DEED - Deed Restriction Listing

Records of Emergency Release Reports

HMIRS - Hazardous Materials Information Reporting System
CHMIRS - California Hazardous Material Incident Report System

LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA BOND EXP. PLAN	Bond Expenditure Plan
NPDES	NPDES Permits Listing
UIC	UIC Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
HIST CORTESE	Hazardous Waste & Substance Site List
CUPA Listings	CUPA Resources List
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
ENF	Enforcement Action Listing
San Bern. Co. Permit	Hazardous Material Permits
HAZNET	Facility and Manifest Data
EMI	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
Financial Assurance	Financial Assurance Information Listing
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
MWMP	Medical Waste Management Program Listing
PROC	Certified Processors Database
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing
WDS	Waste Discharge System
LEAD SMELTERS	Lead Smelter Sites
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
2020 COR ACTION	2020 Corrective Action Program List
PRP	Potentially Responsible Parties
COAL ASH DOE	Steam-Electric Plant Operation Data

EXECUTIVE SUMMARY

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP---------- EDR Proprietary Manufactured Gas Plants
EDR US Hist Cleaners------- EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 12/16/2014 has revealed that there is 1 NPL site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
B.F. GOODRICH	***3196 NORTH LOCUST AVENU***	***E 1/2 - 1 (0.788 mi.)***	***0***	***8***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 06/06/2014 has revealed that there is 1 FUDS site within approximately 1 mile of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
RIALTO AMMUNITION STORAGE POIT		ESE 1/2 - 1 (0.947 mi.)	4	20

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 11/25/2013 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
B.F. GOODRICH	***3196 NORTH LOCUST AVENU***	***E 1/2 - 1 (0.788 mi.)***	***0***	***8***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 3 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	2854 W BUENA VISTA DR	ENE 1/8 - 1/4 (0.160 mi.)	3	20

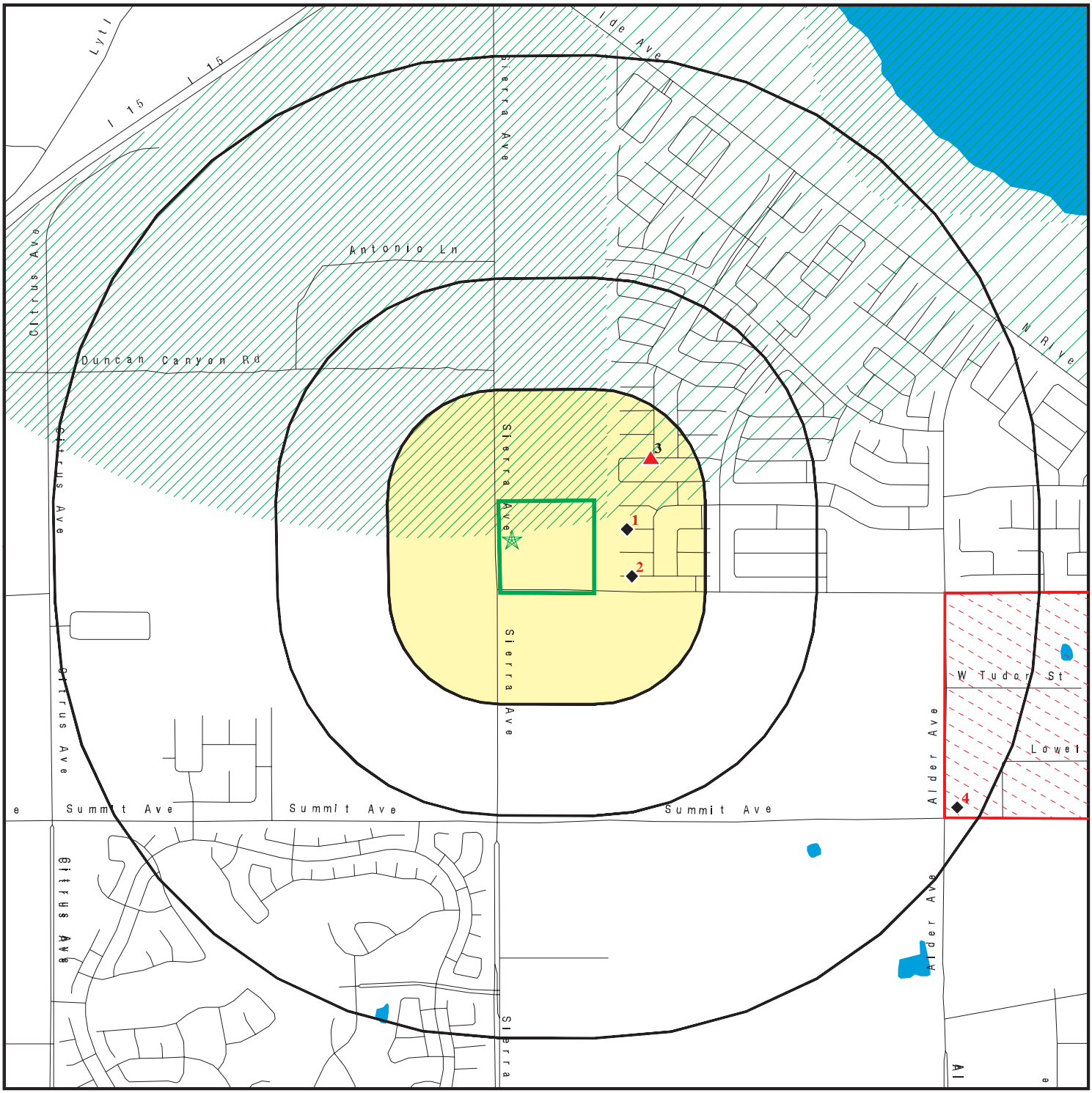
Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	2879 W DAWNVIEW DR	E 0 - 1/8 (0.074 mi.)	1	19
Not reported	2875 W FAIRVIEW DR	ESE 0 - 1/8 (0.086 mi.)	2	20

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
	CDL
	CDL
EXPLOSIVES TECHNOLOGIES INTERNATIO	SLIC

OVERVIEW MAP - 4203629.2S



0 1/4 1/2 1 Miles

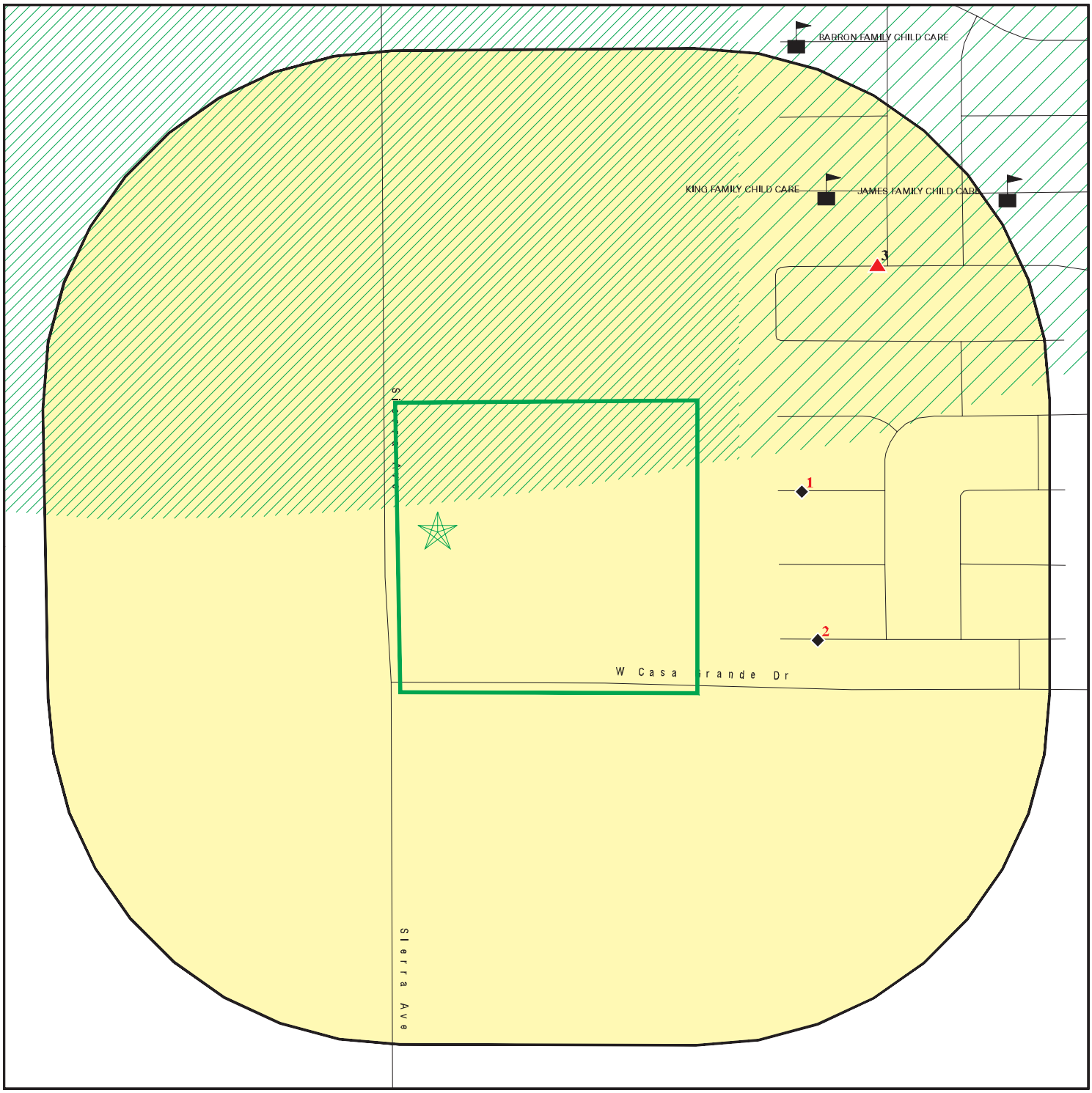
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Sierra Avenue, Fontana, CA San Bernardino County	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	Sierra Avenue Rialto CA 92377	CONTACT:	Francesca Nguyen
LAT/LONG:	34.1595 / 117.4355	INQUIRY #:	4203629.2s
		DATE:	February 10, 2015 9:21 am

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DETAIL MAP - 4203629.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
Sensitive Receptors
National Priority List Sites
Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA
Oil & Gas pipelines from USGS
100-year flood zone
500-year flood zone

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Sierra Avenue, Fontana, CA San Bernardino County	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	Sierra Avenue Rialto CA 92377	CONTACT:	Francesca Nguyen
LAT/LONG:	34.1595 / 117.4355	INQUIRY #:	4203629.2s
		DATE:	February 10, 2015 9:22 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	1	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
SWEEPS UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LIENS	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	1	NR	1
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	1	NR	1
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
San Bern. Co. Permit	0.250		0	0	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
HWT	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		2	1	NR	NR	NR	3
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

NPL **B.F. GOODRICH** **NPL** **1006371515**
Region **3196 NORTH LOCUST AVENUE** **CERCLIS** **CAN000905945**
East **RIALTO, CA 92377** **US ENG CONTROLS**
1/2-1 **ROD**
4159 ft. **PRP**

NPL:

EPA ID:	CAN000905945
EPA Region:	09
Federal:	N
Final Date:	2009-09-23 00:00:00

CERCLIS:

Site ID:	0905945
EPA ID:	CAN000905945
Facility County:	SAN BERNARDINO
Short Name:	B.F. GOODRICH
Congressional District:	31
IFMS ID:	09JW
SMSA Number:	Not reported
USGC Hydro Unit:	Not reported
Federal Facility:	Not a Federal Facility
DMNSN Number:	0.00000
Site Orphan Flag:	Not reported
RCRA ID:	Not reported
USGS Quadrangle:	Not reported
Site Init By Prog:	T
NFRAP Flag:	Not reported
Parent ID:	Not reported
RST Code:	Not reported
EPA Region:	09
Classification:	Not reported
Site Settings Code:	Not reported
NPL Status:	Currently on the Final NPL
DMNSN Unit Code:	Not reported
RBRAC Code:	Not reported
RResp Fed Agency Code:	Not reported
Non NPL Status:	Not reported
Non NPL Status Date:	/ /
Site Fips Code:	06071
CC Concurrence Date:	/ /
CC Concurrence FY:	Not reported
Alias EPA ID:	Not reported
Site FUDS Flag:	Not reported

CERCLIS Site Contact Name(s):

Contact ID:	9000127.00000
Contact Name:	Wayne Praskins
Contact Tel:	(415) 972-3181
Contact Title:	Remedial Project Manager (RPM)
Contact Email:	Not reported

Contact ID:	13003854.00000
Contact Name:	Leslie Ramirez
Contact Tel:	(415) 972-3978
Contact Title:	Site Assessment Manager (SAM)
Contact Email:	Not reported

B.F. GOODRICH (Continued) **1006371515**

Contact ID: 13003858.00000
Contact Name: Sharon Murray
Contact Tel: (415) 972-4250
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

Contact ID: 13004003.00000
Contact Name: Carl Brickner
Contact Tel: Not reported
Contact Title: Site Assessment Manager (SAM)
Contact Email: Not reported

CERCLIS Site Alias Name(s):
Alias ID: 101
Alias Name: RIALTO COLTON PLUME
Alias Address: Not reported
Not reported
Alias ID: 102
Alias Name: RIALTO COLTON PLUME
Alias Address: Not reported
RIALTO, CA
Alias ID: 103
Alias Name: GWK
Alias Address: Not reported
Not reported
Alias ID: 104
Alias Name: B.F. GOODRICH
Alias Address: 3196 NORTH LOCUST AVENUE
RIALTO, CA 92377
Alias ID: 101
Alias ID: 103
Alias Comments: SITE RENAMEDNOW A CHILD SITE
Site Description: The B.F. Goodrich Superfund Site includes soil and groundwater contaminated with perchlorate, trichloroethene, and other chemicals in an industrial area in Rialto, California known as the 160-acre area. The Site, located about 60 miles east of the city of Los Angeles, also includes contaminated groundwater that has spread from the 160-acre area. Land use in the area overlying the contaminated groundwater is largely industrial, commercial, and residential, and a limited amount of open space. EPA's CERCLIS ID No. for the Site is: CAN000905945. From 2002 until about 2008, the California Regional Water Quality Control Board, Santa Ana Region (Water Board) led investigation and cleanup efforts at the Site. EPA added the Site to the Superfund National Priorities List (NPL) in September 2009 and is now the lead agency for the Site. The Water Board is the primary state agency supporting EPA's efforts. The California Department of Toxic Substances Control (DTSC) is also involved at the Site. DTSC's primary responsibility is the investigation and remediation of an operation on the 160-acre area associated with a former treatment, storage, and disposal facility (a TSD facility). The groundwater at or near the Site is a vital resource for residents of the cities of Rialto and Colton. The Rialto-Colton groundwater basin (RCB), in which some or all of the Site is located, has in recent years supplied more than 8 million gallons of drinking water per day, enough water to meet the needs of tens of thousands of area residents. The contamination has forced the closure of many drinking water supply wells in the basin. EPA's response activities at the Site have been conducted primarily under the authority established in the federal Superfund law, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended. Remedial investigation work at and near the Site has been

B.F. GOODRICH (Continued) **1006371515**

completed by EPA, Potentially Responsible Parties, local water utilities, the County of San Bernardino, the U.S. Geological Survey, and others. Since about 2005, the U.S. Department of Defense (DOD) has spent or committed approximately $20 million in public funds to the Rialto area, primarily to demonstrate and evaluate water treatment technologies capable of removing perchlorate from contaminated water supply wells. Some of water treatment systems installed with DOD funding are now operated by local water utilities. The water treatment systems have been installed on wells some distance from the 160- acre area; not in the areas targeted by the Source Area Operable Unit (SA OU). The State of California has also provided or committed approximately $19 million in funds to pay for water treatment systems at and near the Site. The SA OU is not intended to address an area of groundwater contamination to the south and west of the 160-acre area, which originates, at least in part, in an area where earthen-covered concrete storage igloos were constructed by the U.S. Army in the 1940s. Most of the igloos were demolished in 1998 after the County of San Bernardino purchased the property for expansion of the Mid- Valley Sanitary Landfill (MVSL). In 1942, the U.S. Army acquired 2,822 acres of mostly undeveloped land for use as the Rialto Ammunition Backup Storage Point (RASP). The U.S. Army subsequently developed and operated on approximately 740 of the 2,822 acres. The 740-acre area includes most or all of the 160-acre area. The RASP included a network of rail spurs to store rail cars, bunkers adjacent to the rail spurs, approximately 20 earthen-covered concrete storage igloos, approximately four magazines used to store ammunition, and assorted buildings. The RASP was an inspection, consolidation, and storage facility for railcars transporting bombs, ammunition, and other ordnance to the Port of Los Angeles, California. The materials handled at the RASP are likely to have included flares and other pyrotechnics containing perchlorate salts. In 1946, after World War II ended, the United States government sold the RASP property. Since then, portions of the former RASP property have been used by a variety of defense contractors, fireworks manufacturers, and others who used perchlorate salts and other chemicals in their manufacturing processes or in their products. From about 1952 to 1957, the West Coast Loading Corporation tested and manufactured pyrotechnic devices onsite. West Coast Loading Corporation manufactured photoflash flares and ground-burst simulators, both containing potassium perchlorate, used its facility in 1957 to dry a large amount of ammonium perchlorate, and disposed of wastes onsite. From about 1957 to 1962, B.F. Goodrich Corporation (Goodrich) conducted research, development, testing, and production of solid-fuel rocket propellant and solid-fuel missile and rocket motors containing ammonium perchlorate, used chlorinated solvents in its operations, and disposed of wastes in one or more onsite pits. From about 1968 to 1987, Pyrotronics (including its Apollo, Red Devil, and California Display Fireworks divisions) manufactured, tested, and distributed pyrotechnics containing potassium perchlorate, and disposed of wastes onsite. Since 1979, Pyro Spectaculars Inc. (PSI), a public display fireworks operator, wholesaler, and importer and exporter of fireworks, has operated on the 160-acre area. PSI has tested fireworks, burned waste materials, and disposed of wastes onsite. Since about 1989, American Promotional Events - West (APE-West) has operated on the 160- acre area. APE-West has tested and stored fireworks containing potassium perchlorate and burned defective and off-spec fireworks onsite. Enforcement efforts by the State of California began in about 2002, when the Water Board directed multiple parties to investigate the extent of soil and/or groundwater contamination at and near the Site. Between 2002 and 2008, the Water Board issued approximately 23 directives to current and past property owners and tenants pursuant to state authority, requiring submittal of information, soil testing, and/or groundwater testing. Since 2005, the California Department of Toxic Substances Control (DTSC) has also directed and overseen soil testing on a portion of the

B.F. GOODRICH (Continued) **1006371515**

Site. EPA enforcement efforts have included the issuance of a Unilateral Administrative Order for Remedial Investigation (RI) work (2003), notifications to three companies that operated at the Site (or their corporate successors) and two current property owners that may be responsible for the contamination (2008), an Administrative Order on Consent for RI work (2009), and a complaint filed by the U.S. Department of Justice (DOJ) on EPA's behalf pursuant to CERCLA and the Resource Conservation and Recovery Act (RCRA) seeking reimbursement of costs and performance of response actions by the defendants to the lawsuit (2010). EPA added the Site to the Superfund National Priorities List (NPL) in September 2009. The RCB is an important source of drinking water for the cities of Rialto, Colton, and Fontana. Between 1997 and 2007, the RCB supplied approximately 7.5 to 16 million gallons per day (MGD) to residents and businesses in the region. There are four water utilities responsible for the majority of the groundwater pumping in the RCB: the City of Rialto, West Valley Water District (WVWD), the City of Colton, and Fontana Water Company (FWC). A 1961 decree entered in San Bernardino County Superior Court restricts pumping of groundwater from the RCB. The decree allows unlimited pumping from the basin by parties to the decree if the average of the spring-high water levels at three wells specified in the decree (the index wells) exceeds 1,002.3 feet above mean sea level (MSL). When the level is between 969.7 and 1,002.3 feet above MSL, a party's entitlement is the sum of the amounts specified in the decree. If the average spring-high water level drops below 969.7 feet above MSL, the entitlement is reduced by 1 percent for every foot the average is below 969.7 feet above MSL, but not by more than 50 percent. There is a dispute among the parties to the Decree over the time period that restrictions, if in effect, apply. Designated existing or potential beneficial uses for the RCB in the 2008 State of California Water Quality Control Plan are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply. Because the selected remedy only addresses groundwater, current and reasonably anticipated future land uses have limited relevance to the selected remedy. The primary relevance is in the selection of locations for the water treatment equipment and other facilities to be constructed as part of the remedy. These decisions will be made post-ROD, during the remedial design phase. Land use at the Site is a mix of residential, industrial, and commercial uses, with limited open space. A Record of Decision (ROD) for OU01 (Source Area Groundwater) of the B.F. Goodrich Superfund Site was signed in September 2010.

CERCLIS Assessment History:

Action Code:	001
Action:	DISCOVERY
Date Started:	/ /
Date Completed:	12/03/02
Priority Level:	Not reported
Operable Unit:	SITEWIDE
Primary Responsibility:	State, Fund Financed
Planning Status:	Not reported
Urgency Indicator:	Not reported
Action Anomaly:	Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code:	001
Action:	UNILATERAL ADMIN ORDER
Date Started:	/ /
Date Completed:	07/14/03

B.F. GOODRICH (Continued) **1006371515**

Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: Notice of Intent by All Parties
Date Started: / /
Date Completed: 08/15/03
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: 12/31/07
Date Completed: 09/03/08
Priority Level: Being considered for proposal to the NPL
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: PROPOSAL TO NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 09/03/08
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: ADMINISTRATIVE ORDER ON CONSENT
Date Started: / /
Date Completed: 03/17/09
Priority Level: Not reported
Operable Unit: FINAL GROUNDWATER REMEDY
Primary Responsibility: Federal Enforcement

B.F. GOODRICH (Continued) **1006371515**

Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: NON-NATIONAL PRIORITIES LIST POTENTIALLY RESPONSIBLE PARTY SEARCH
Date Started: 12/05/02
Date Completed: 09/23/09
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: State Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: EXPANDED SITE INSPECTION/REMEDIAL INVESTIGATION
Date Started: 08/15/03
Date Completed: 09/23/09
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Mixed Funding Federal/RP
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Other Completion Anomaly

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: FINAL LISTING ON NATIONAL PRIORITIES LIST
Date Started: / /
Date Completed: 09/23/09
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL INVESTIGATION
Date Started: 03/17/09
Date Completed: 03/12/10
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Responsible Party
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

B.F. GOODRICH (Continued) **1006371515**

Action Code: 001
Action: COMBINED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 12/31/08
Date Completed: 09/30/10
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: RECORD OF DECISION
Date Started: / /
Date Completed: 09/30/10
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: Special Notice Issued
Date Started: / /
Date Completed: 02/10/11
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMEDIAL DESIGN/REMEDIAL ACTION NEGOTIATIONS
Date Started: 02/10/11
Date Completed: 10/03/12
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: Federal Enforcement
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 003
Action: Lodged By DOJ
Date Started: / /
Date Completed: 10/10/12

B.F. GOODRICH (Continued) **1006371515**

Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: Lodged By DOJ
Date Started: / /
Date Completed: 12/04/12
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: COMBINED REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 09/17/10
Date Completed: 02/26/13
Priority Level: Not reported
Operable Unit: FINAL GROUNDWATER REMEDY
Primary Responsibility: EPA Fund-Financed
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: ADMINISTRATIVE ORDER ON CONSENT
Date Started: / /
Date Completed: 02/26/13
Priority Level: Not reported
Operable Unit: FINAL GROUNDWATER REMEDY
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 002
Action: CONSENT DECREE
Date Started: 10/03/12
Date Completed: 03/19/13
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported

B.F. GOODRICH (Continued) **1006371515**

Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 005
Action: Lodged By DOJ
Date Started: / /
Date Completed: 03/26/13
Priority Level: Not reported
Operable Unit: SITEWIDE
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 004
Action: Lodged By DOJ
Date Started: / /
Date Completed: 03/26/13
Priority Level: Not reported
Operable Unit: FINAL GROUNDWATER REMEDY
Primary Responsibility: Not reported
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: REMEDIAL DESIGN
Date Started: 01/12/12
Date Completed: 04/18/13
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: EPA Fund-Financed
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: CONSENT DECREE
Date Started: 11/30/12
Date Completed: 07/02/13
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

B.F. GOODRICH (Continued) **1006371515**

Action Code: 003
Action: CONSENT DECREE
Date Started: 03/12/13
Date Completed: 07/02/13
Priority Level: Not reported
Operable Unit: FINAL GROUNDWATER REMEDY
Primary Responsibility: Federal Enforcement
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL INVESTIGATION/FEASIBILITY STUDY
Date Started: 02/26/13
Date Completed: / /
Priority Level: Not reported
Operable Unit: FINAL GROUNDWATER REMEDY
Primary Responsibility: Responsible Party
Planning Status: Not reported
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Action Code: 001
Action: POTENTIALLY RESPONSIBLE PARTY REMEDIAL DESIGN
Date Started: 04/18/13
Date Completed: / /
Priority Level: Not reported
Operable Unit: SOURCE AREA
Primary Responsibility: Responsible Party
Planning Status: Primary
Urgency Indicator: Not reported
Action Anomaly: Not reported

For detailed financial records, contact EDR for a Site Report.:

Federal Register Details:
Fed Register Date: 09/23/09
Fed Register Volume: 74
Page Number: 48412

Fed Register Date: 09/03/08
Fed Register Volume: 73
Page Number: 51393

Click this hyperlink while viewing on your computer to access
968 additional US CERCLIS Financial: record(s) in the EDR Site Report.

US ENG CONTROLS:
EPA ID: CAN000905945
Site ID: 0905945
Name: B.F. GOODRICH
Address: 3196 NORTH LOCUST AVENUE

B.F. GOODRICH (Continued) **1006371515**

RIALTO, CA 92377
EPA Region: 09
County: SAN BERNARDINO
Event Code: Not reported
Actual Date: 09/30/2010

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 09/30/2010
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Extraction

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 09/30/2010
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Hydraulic Control

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 09/30/2010
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Ion Exchange

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 09/30/2010
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Liquid Phase Carbon Adsorption

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 09/30/2010
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Monitoring

Action ID: 001
Action Name: RECORD OF DECISION
Action Completion date: 09/30/2010
Operable Unit: 01
Contaminated Media : Groundwater
Engineering Control: Reuse as Drinking Water

ROD:
Full-text of USEPA Record of Decision(s) is available from EDR.

PRP:
PRP name: AMERICAN PROMOTIONAL EVENTS, INC.
AMERICAN PROMOTIONAL EVENTS, INC. - WEST
BLACK & DECKER

B.F. GOODRICH (Continued) **1006371515**

BLACK AND DECKER INC
BROCO INC
COUNTY OF SAN BERNARDINO
DEPT OF THE NAVY
EDWARD STOUT
ELIZABETH RODRIGUEZ
EMHART INDUSTRIES INC
EMHART INDUSTRIES INC
EMHART INDUSTRIES INC
ENSIGN-BICKFORD COMPANY
ENSIGN-BICKFORD INDUSTRIES, INC.
FARM CREDIT ADMINISTRATION
FRED SKOVGARD
FREDERICKSEN CHILDREN'S TRUST UNDER TRUST AGREEMENT DATED FE
GOODRICH CORPORATION
GOODRICH CORPORATION
GOODRICH CORPORATION
J.S. BROWER AND ASSOCIATES
JEANINE ELZIE
JOHN CALLAGY
KWIKSET CORP
KWIKSET LOCKS, INC
LAWRENCE LIVERMORE NATIONAL LAB
LINDA FREDERICKSEN
MARY CALLAGY
MICHELLE ANN POINTON TRUST UNDER TRUST AGREEMENT DATED FEB.
MILDRED WILKINS
NASA
ORDNANCE ASSOCIATES
PYRO SPECTACULARS INC.
RAYTHEON
RAYTHEON MISSILE SYSTEMS COMPANY
ROBERTSON'S READY MIX, INC.
STEPHEN CALLAGY
THE WALTER M. POINTON TRUST DATED NOV. 19, 1991
U.S. AIR FORCE
U.S. ARMY
U.S. CUSTOMS AND BORDER PROTECTION
U.S. DEPT OF DEFENSE
U.S. DEPT OF ENERGY
U.S. FOREST SERVICE
WHITTAKER CORPORATION
ZAMBELLI FIREWORKS COMPANY
ZAMBELLI FIREWORKS INTERNATIONALE,
ZAMBELLI FIREWORKS MANUFACTURING COMPANY
ZAMBELLI FIREWORKS MANUFACTURING COMPANY, INC.

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1 **EDR US Hist Auto Stat** **1015390782**
East **2879 W DAWNVIEW DR** **N/A**
< 1/8 **RIALTO, CA 92377**
0.074 mi.
392 ft.

Relative: EDR Historical Auto Stations:
Lower Name: MOTORS UNLIMITED
Year: 2007
Actual: Address: 2879 W DAWNVIEW DR
1758 ft.

2
ESE
< 1/8
0.086 mi.
452 ft.

2875 W FAIRVIEW DR
RIALTO, CA 92377

EDR US Hist Auto Stat **1015390695**
N/A

Relative:
Lower

Actual:
1742 ft.

EDR Historical Auto Stations:
Name: AUTO CRAFT
Year: 2009
Address: 2875 W FAIRVIEW DR

3
ENE
1/8-1/4
0.160 mi.
844 ft.

2854 W BUENA VISTA DR
RIALTO, CA 92377

EDR US Hist Auto Stat **1015389866**
N/A

Relative:
Higher

Actual:
1781 ft.

EDR Historical Auto Stations:
Name: CONLEYS AUTO DETAILING
Year: 2001
Address: 2854 W BUENA VISTA DR

4
ESE
1/2-1
0.947 mi.
5000 ft.

RIALTO AMMUNITION STORAGE POIT
RIALTO, CA

FUDS **1007212209**
N/A

Relative:
Lower

Actual:
1643 ft.

FUDS:
Federal Facility ID: CA9799F5579
FUDS #: J09CA0572
INST ID: 61163
Facility Name: RIALTO AMMUNITION STORAGE POIT
City: RIALTO
State: CA
EPA Region: 09
County: SAN BERNARDINO
Congressional District: 43
US Army District: Los Angeles District (SPL)
Fiscal Year: 2012
Telephone: 213-452-3920
NPL Status: Not Listed
RAB: Not reported
CTC: 801.7999
Current Owner: Private Sector
Current Prog: Not reported
Future Prog: Not reported
Acreage: Not reported
Description: The site is located on 2,821.75 acres 7 miles northwest of San Bernardino, California. In 1942, the Department of War acquired 2,814.55 acres by fee through deed and declaration of taking and a 7.6-acre railroad easement for a total acquisition of 2,822.15 acres. The site was known as the Los Angeles Backup Storage Facility. This name was later changed to Rialto Ammunition Storage Point. The Rialto Ammunition Storage Point is located in San Bernardino County approximately 5 miles north of the City of Rialto and 10 miles northeast of the City of Fontana, California. The property is now used for both industrial (including a municipal landfill owned and operated

RIALTO AMMUNITION STORAGE POIT (Continued) **1007212209**

by the County of San Bernardino) and residential purposes.

History: The site was developed for use as depot, including construction of a complete storage facility. A building area was also established east of the storage area with buildings used for administration, kitchen, barracks, vehicle storage and maintenance, shops, and a fire station. Additionally, a gas station, shelters, sewage plant, and water supply were constructed. The Army leased out approximately 2,000 acres for crop cultivation and grazing. Rialto Ammunition Storage Point remained active until late 1945. On 13 November 1945, the Army reported 2814.55 acres fee and 7.60 acres leased as excess to the War Assets Administration. Custody was assumed by the Farm Credit Administration on 9 July 1946. This acreage was then subdivided over a number of years and sold. Most of the property is currently zoned industrial and occupied by a municipal landfill and various companies, including pyrotechnics companies. Some portions of the property, including portions of the building area, have been developed into residential use. Military improvements that have been beneficially used include the water well, and concrete storage bunkers.

Latitude: 34.15083332999

Longitude: -117.41805556

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
FONTANA	S107539839		ON GLEN HELEN PARKWAY @ SIERRA		CDL
FONTANA	S107540075		ON SIERRA AVENUE (CROSS-1/2 MI	92336	CDL
RIALTO	S108985937	EXPLOSIVES TECHNOLOGIES INTERNATIO	2900 N TAMARIND		SLIC

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/16/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: EPA
Telephone: N/A
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/21/2014
Date Data Arrived at EDR: 10/07/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/03/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/03/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/03/2014
Date Data Arrived at EDR: 12/12/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/29/2014
Date Data Arrived at EDR: 09/30/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 37

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/19/2014
Date Made Active in Reports: 12/24/2014
Number of Days to Update: 35

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 11/14/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 87

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/04/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 10

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/06/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 19

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 12
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 6
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 12/23/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/06/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 8
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 11/14/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 87
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 11/13/2014
Date Data Arrived at EDR: 11/18/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 83
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/04/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 10
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10
Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 12
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 09/29/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/31/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 38

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/15/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 42
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 53
Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 11/12/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30
Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 70

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 09/02/2014
Date Made Active in Reports: 09/24/2014
Number of Days to Update: 22

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 70

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 12/24/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 12/15/2014
Date Data Arrived at EDR: 12/18/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 36

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/05/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/08/2014
Date Data Arrived at EDR: 12/09/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 45

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 12/09/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/2014
Date Data Arrived at EDR: 10/01/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 36

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/30/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 10/27/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 12/10/2014
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 01/28/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/21/2015
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/03/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 06/06/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 8

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 12/24/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 12/30/2014
Date Data Arrived at EDR: 12/31/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 29

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/30/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 01/29/2015
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/31/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 01/09/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/16/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 12/29/2014
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 21

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/04/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/07/2014
Date Data Arrived at EDR: 10/08/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/08/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/16/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/09/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 11/06/2014
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 11/19/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 45

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/19/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 40
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/29/2014
Date Data Arrived at EDR: 12/29/2014
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 36
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List
The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/28/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 08/21/2014
Number of Days to Update: 49
Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Annually

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 12/23/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 11/12/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 30

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/19/2014
Number of Days to Update: 35

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/16/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 03/25/2014
Date Made Active in Reports: 04/28/2014
Number of Days to Update: 34

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 12/24/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/18/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/18/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 41

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 12/29/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36
Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64
Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List
The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7
Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/14/2014
Next Scheduled EDR Contact: 02/23/2015
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands
Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339
Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: N/A

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 12/15/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 42

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 10/28/2014
Date Data Arrived at EDR: 10/30/2014
Date Made Active in Reports: 12/10/2014
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/16/2014
Date Data Arrived at EDR: 10/31/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 17

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Annually

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 01/30/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/13/2014
Date Data Arrived at EDR: 12/09/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 48

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 12/09/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 01/15/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Varies

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/12/2015
Date Data Arrived at EDR: 01/13/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/13/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Quarterly

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 11/24/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Quarterly

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 11/19/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 11/11/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 10/21/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 35

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 10/21/2014
Date Data Arrived at EDR: 11/07/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 38

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 12/08/2014
Date Data Arrived at EDR: 12/11/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 43

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 12/05/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 11/20/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 01/07/2015
Number of Days to Update: 44

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 10/06/2014
Date Data Arrived at EDR: 10/07/2014
Date Made Active in Reports: 11/19/2014
Number of Days to Update: 43

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 24

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/19/2014
Date Made Active in Reports: 01/06/2015
Number of Days to Update: 48

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 11/19/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 38

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 01/16/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 20

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 12/11/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 39

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 11/04/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 38

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 07/22/2014
Date Data Arrived at EDR: 11/12/2014
Date Made Active in Reports: 12/19/2014
Number of Days to Update: 37

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 11/21/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 35

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/20/2015
Date Data Arrived at EDR: 01/21/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 15

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/31/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 07/17/2014
Number of Days to Update: 41

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/19/2015
Date Data Arrived at EDR: 01/20/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 16

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/20/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/07/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/25/2014
Number of Days to Update: 28

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 10/20/2014
Date Data Arrived at EDR: 10/22/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 54

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/11/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 47

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 12

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 10/02/2014
Date Data Arrived at EDR: 10/03/2014
Date Made Active in Reports: 11/20/2014
Number of Days to Update: 48

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 10/08/2014
Date Data Arrived at EDR: 10/22/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 54

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 33

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 12/01/2014
Date Data Arrived at EDR: 12/05/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 49

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 12/18/2014
Date Data Arrived at EDR: 12/19/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 35

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 09/16/2014
Date Data Arrived at EDR: 09/18/2014
Date Made Active in Reports: 09/25/2014
Number of Days to Update: 7

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 02/06/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 11/01/2014
Date Data Arrived at EDR: 11/12/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 30

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 11/01/2014
Date Data Arrived at EDR: 11/12/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 30

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 11/01/2014
Date Data Arrived at EDR: 11/10/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/08/2014
Date Data Arrived at EDR: 12/09/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 48
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 12/05/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/08/2014
Date Data Arrived at EDR: 10/10/2014
Date Made Active in Reports: 11/20/2014
Number of Days to Update: 41
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/08/2014
Date Data Arrived at EDR: 10/10/2014
Date Made Active in Reports: 11/25/2014
Number of Days to Update: 46
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 12/22/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 01/07/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 27
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/07/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/03/2014
Date Data Arrived at EDR: 01/09/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 25
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/04/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 53

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 12/04/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2014
Date Data Arrived at EDR: 11/21/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 38

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 12/04/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/12/2015
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/21/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 36

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 01/09/2015
Date Data Arrived at EDR: 01/12/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 22

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/15/2014
Date Data Arrived at EDR: 12/18/2014
Date Made Active in Reports: 01/26/2015
Number of Days to Update: 39

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 12/11/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 11/19/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 34

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 11/25/2014
Next Scheduled EDR Contact: 03/16/2015
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/10/2014
Date Data Arrived at EDR: 11/10/2014
Date Made Active in Reports: 12/15/2014
Number of Days to Update: 35

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/09/2015
Next Scheduled EDR Contact: 05/25/2015
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 11/24/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 12/31/2014
Number of Days to Update: 36

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 11/21/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 12/09/2014
Date Data Arrived at EDR: 12/11/2014
Date Made Active in Reports: 01/23/2015
Number of Days to Update: 43

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 01/05/2015
Number of Days to Update: 42

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/11/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 12/01/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 57

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/11/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 01/06/2015
Date Data Arrived at EDR: 01/09/2015
Date Made Active in Reports: 02/05/2015
Number of Days to Update: 27

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/02/2015
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 02/03/2015
Number of Days to Update: 28

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 12/29/2014
Next Scheduled EDR Contact: 04/13/2015
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/08/2014
Date Data Arrived at EDR: 12/08/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 50

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 12/05/2014
Next Scheduled EDR Contact: 03/23/2015
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 10/28/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 44

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 10/29/2014
Date Data Arrived at EDR: 11/24/2014
Date Made Active in Reports: 12/29/2014
Number of Days to Update: 35

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/05/2015
Next Scheduled EDR Contact: 04/20/2015
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 09/26/2014
Date Data Arrived at EDR: 10/29/2014
Date Made Active in Reports: 12/12/2014
Number of Days to Update: 44

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/26/2015
Next Scheduled EDR Contact: 05/11/2015
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/26/2014
Date Data Arrived at EDR: 12/15/2014
Date Made Active in Reports: 02/02/2015
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/15/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 12/18/2014
Date Data Arrived at EDR: 12/23/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 35

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 12/18/2014
Next Scheduled EDR Contact: 04/06/2015
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 11/17/2014
Date Data Arrived at EDR: 11/18/2014
Date Made Active in Reports: 12/30/2014
Number of Days to Update: 42

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 02/02/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/17/2014
Next Scheduled EDR Contact: 03/02/2015
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/12/2015
Next Scheduled EDR Contact: 04/27/2015
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 11/01/2014
Date Data Arrived at EDR: 11/05/2014
Date Made Active in Reports: 11/24/2014
Number of Days to Update: 19

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/04/2015
Next Scheduled EDR Contact: 05/18/2015
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/19/2015
Next Scheduled EDR Contact: 05/04/2015
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/26/2014
Next Scheduled EDR Contact: 03/09/2015
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/12/2014
Next Scheduled EDR Contact: 03/30/2015
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SIERRA AVENUE, FONTANA, CA SAN BERNARDINO COUNTY
SIERRA AVENUE
RIALTO, CA 92377

TARGET PROPERTY COORDINATES

Latitude (North):	34.1595 - 34° 9' 34.20''
Longitude (West):	117.4355 - 117° 26' 7.80''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	459856.8
UTM Y (Meters):	3779732.0
Elevation:	1762 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	34117-B4 DEVORE, CA
Most Recent Revision:	1988

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

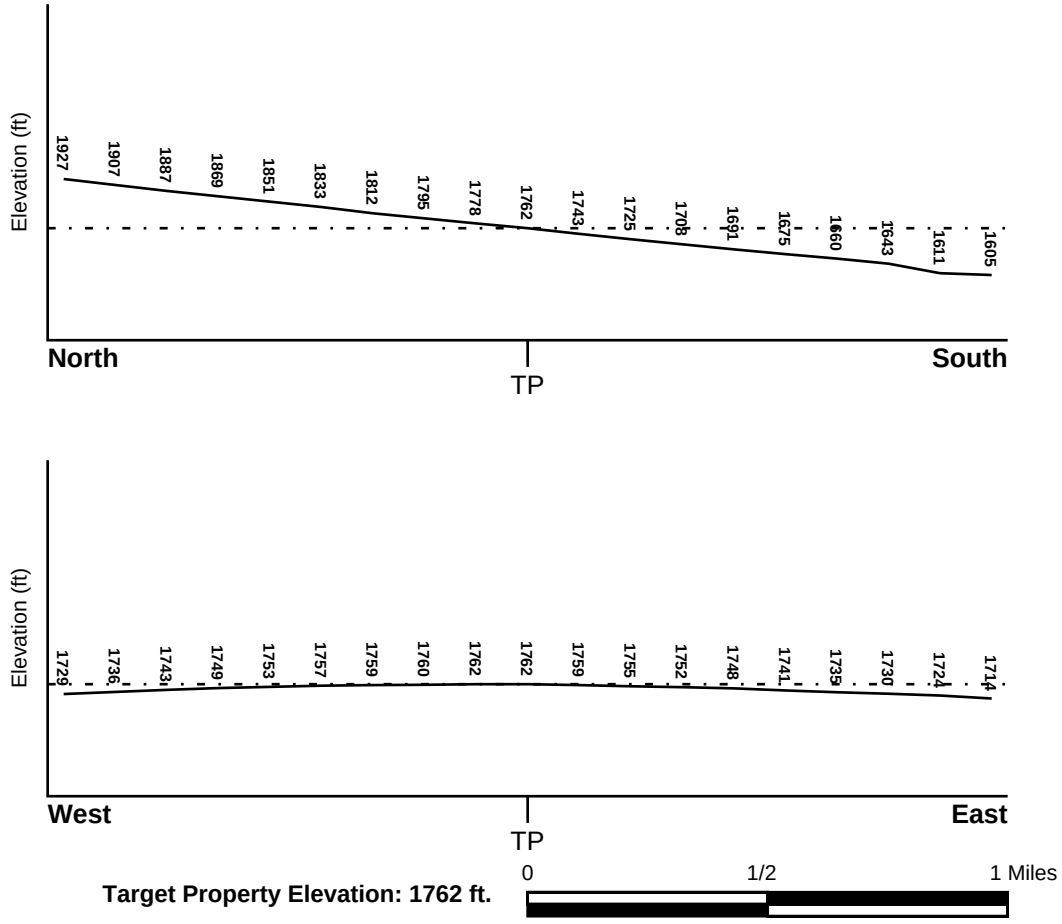
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SAN BERNARDINO, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06071C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

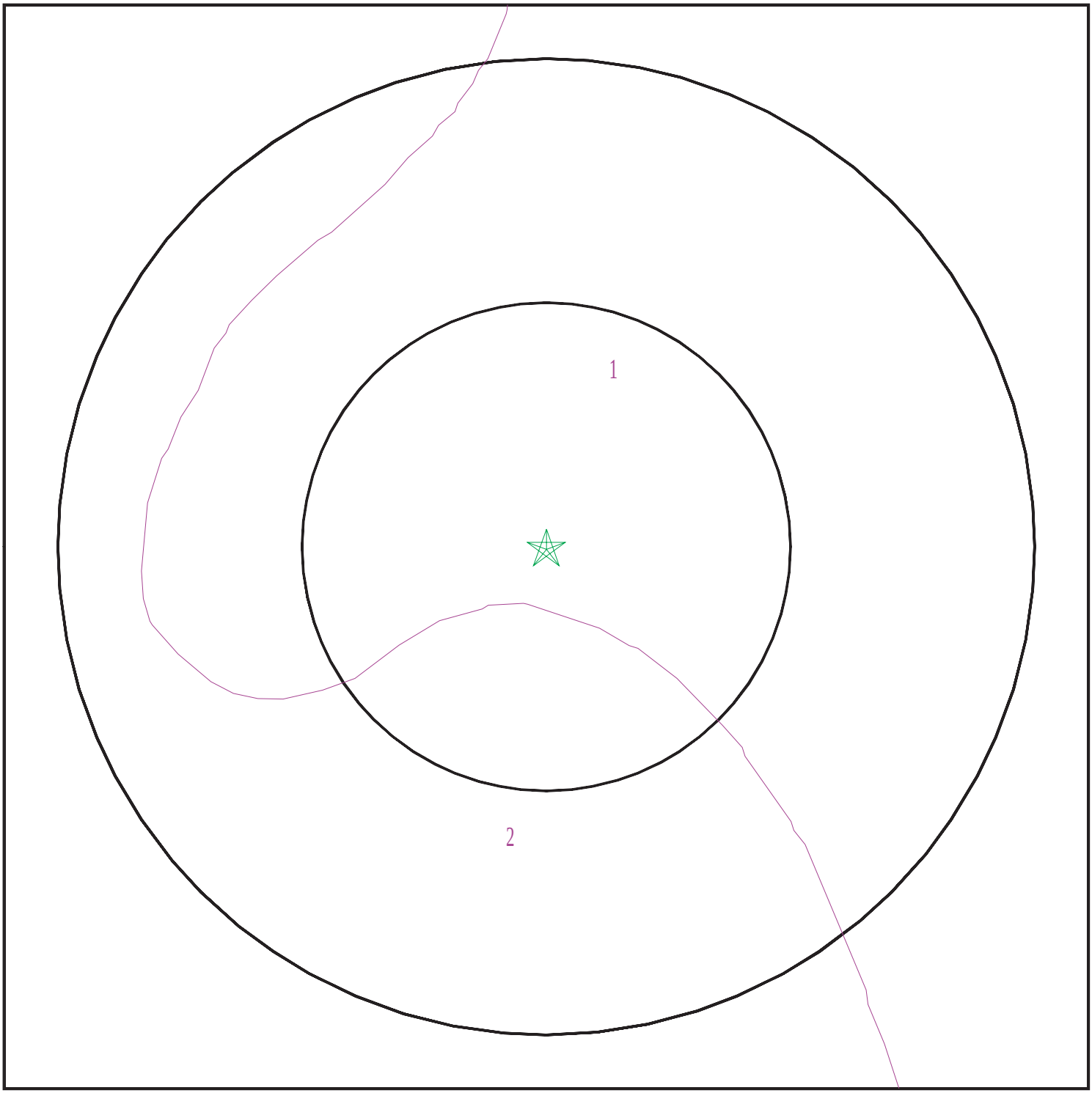
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4203629.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Sierra Avenue, Fontana, CA San Bernardino County	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	Sierra Avenue Rialto CA 92377	CONTACT:	Francesca Nguyen
LAT/LONG:	34.1595 / 117.4355	INQUIRY #:	4203629.2s
		DATE:	February 10, 2015 9:23 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Soboba

Soil Surface Texture: very stony loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	very stony loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 6.1 Min: 5.6
2	9 inches	59 inches	very stony sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 141	Max: 7.8 Min: 6.6

Soil Map ID: 2

Soil Component Name: SOBOBA

Soil Surface Texture: gravelly loamy sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 6.5 Min: 6.1
2	11 inches	35 inches	very gravelly loamy sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 141 Min: 42	Max: 6.5 Min: 6.1
3	35 inches	59 inches	very stony sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand.	Max: 141 Min: 141	Max: 7.3 Min: 6.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000142263	1/4 - 1/2 Mile NW
B3	USGS40000142325	1/2 - 1 Mile NNE
B4	USGS40000142324	1/2 - 1 Mile NNE
B5	USGS40000142321	1/2 - 1 Mile NNE
B6	USGS40000142320	1/2 - 1 Mile NNE
B7	USGS40000142323	1/2 - 1 Mile NNE
B8	USGS40000142322	1/2 - 1 Mile NNE
C9	USGS40000142330	1/2 - 1 Mile NNE
D12	USGS40000142327	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

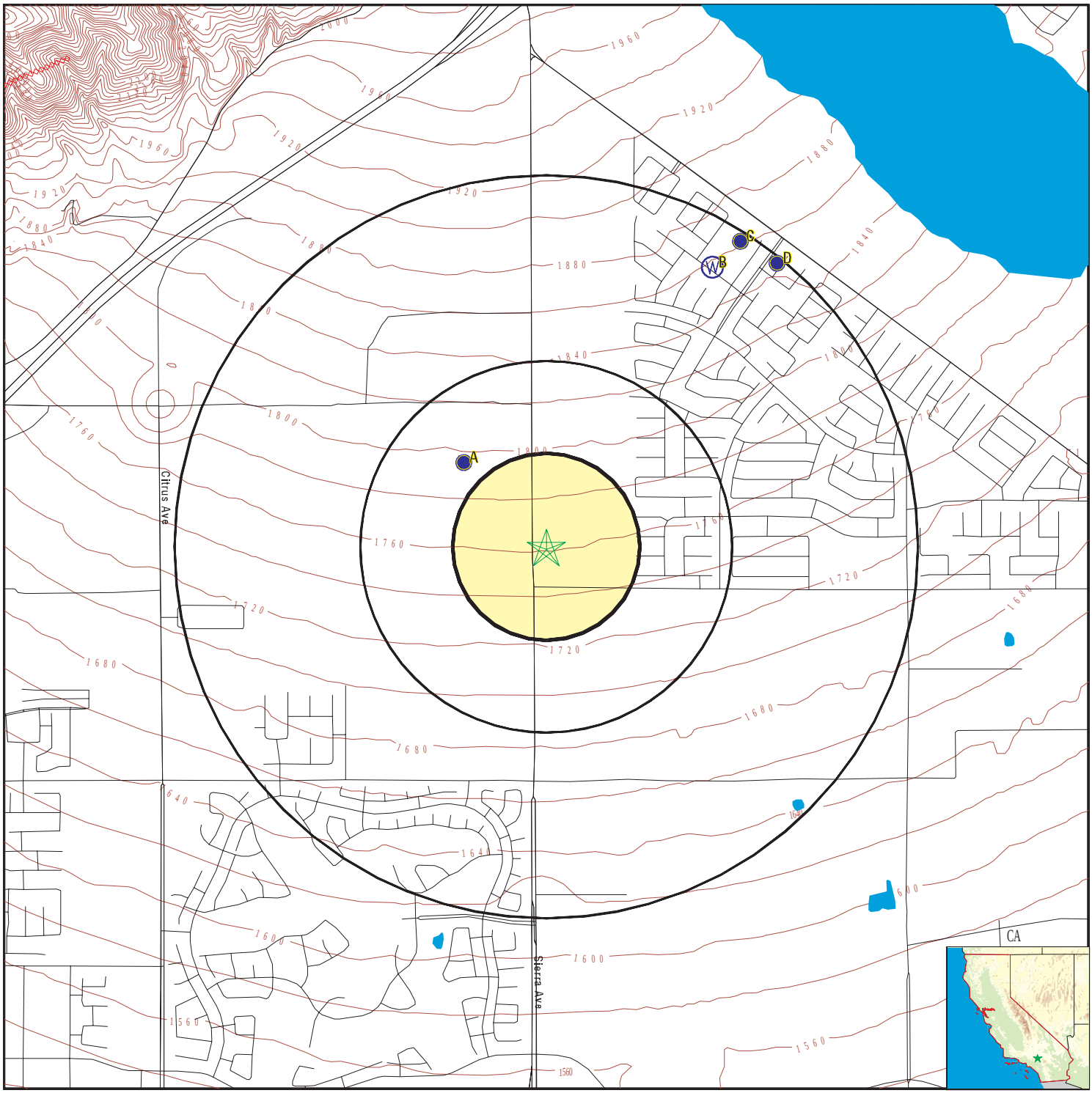
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	CADW50000004868	1/4 - 1/2 Mile NW
D10	CADW50000004915	1/2 - 1 Mile NE
C11	CADW50000004918	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 4203629.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Sierra Avenue, Fontana, CA San Bernardino County	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	Sierra Avenue Rialto CA 92377	CONTACT:	Francesca Nguyen
LAT/LONG:	34.1595 / 117.4355	INQUIRY #:	4203629.2s
		DATE:	February 10, 2015 9:23 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
NW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000142263**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340946117261701		
Monloc name:	001N005W19A001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1627869
Longitude:	-117.4389374	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1794
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	167
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1992-01-10	158.62	

A2
NW
1/4 - 1/2 Mile
Higher

CA WELLS **CADW50000004868**

Latitude :	34.1628		
Longitude :	117.4398		
Site code:	341628N1174398W001	Casgem sta:	01N05W19A001S
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	36		
Basin cd:	8-2.04	Basin desc:	Rialto-Colton
Org unit n:	Southern Region Office	Site id:	CADW50000004868

B3
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000142325**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341013117253906		
Monloc name:	001N005W17L006S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1704194
Longitude:	-117.4276917	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1851
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20080617	Welldepth:	120
Welldepth units:	ft	Wellholedepth:	1222
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B4
NNE **FED USGS** **USGS40000142324**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341013117253905		
Monloc name:	001N005W17L005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1704194
Longitude:	-117.4276917	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1851
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20080617	Welldepth:	220
Welldepth units:	ft	Wellholedepth:	1222
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B5
NNE **FED USGS** **USGS40000142321**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341013117253902		
Monloc name:	001N005W17L002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1704194
Longitude:	-117.4276917	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1851
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20080617	Welldepth:	945
Welldepth units:	ft	Wellholedepth:	1222
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B6
NNE **FED USGS** **USGS40000142320**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341013117253901		
Monloc name:	001N005W17L001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1704194
Longitude:	-117.4276917	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1851
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	20080617	Welldepth:	1200
Welldepth units:	ft	Wellholedepth:	1222
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B7
NNE **FED USGS** **USGS40000142323**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341013117253904		
Monloc name:	001N005W17L004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1704194
Longitude:	-117.4276917	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1851
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	20080617	Welldepth:	360
Welldepth units:	ft	Wellholedepth:	1222
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B8
NNE **FED USGS** **USGS40000142322**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341013117253903		
Monloc name:	001N005W17L003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1704194
Longitude:	-117.4276917	Sourcemap scale:	24000
Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1851
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	20080617	Welldepth:	480
Welldepth units:	ft	Wellholedepth:	1222
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

C9
NNE **FED USGS** **USGS40000142330**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341017117253301		
Monloc name:	001N005W17K003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	Not Reported	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1713978
Longitude:	-117.4267148	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1860
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19680306	Welldepth:	300
Welldepth units:	ft	Wellholedepth:	300
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 10

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-10-19	76.40		2004-04-19	74.83	
2003-10-20	75.62		2003-04-22	72.69	
2002-10-29	77.37		2002-04-11	77.07	
2001-10-24	76.16		2001-04-16	69.41	
2000-10-26	76.52		2000-04-14	71.26	

D10
NE **CA WELLS** **CADW50000004915**
1/2 - 1 Mile
Higher

Latitude :	34.1706		
Longitude :	117.4251		
Site code:	341706N1174251W001	Casgem sta:	01N05W17K001S
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	36		
Basin cd:	8-2.04	Basin desc:	Rialto-Colton
Org unit n:	Southern Region Office	Site id:	CADW50000004915

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

C11
NNE
1/2 - 1 Mile
Higher | **CA WELLS** | **CADW50000004918**

Latitude :	34.171471		
Longitude :	117.426041		
Site code:	341715N1174260W001	Casgem sta:	01N05W17K003S
Local well:	Well 31	Casgem s 1:	Observation
County id:	36		
Basin cd:	8-2.04	Basin desc:	Rialto-Colton
Org unit n:	Southern Region Office	Site id:	CADW50000004918

D12
NE
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40000142327**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341014117252401		
Monloc name:	001N005W17K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.1705645
Longitude:	-117.4242147	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1851
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19280119	Welldepth:	318
Welldepth units:	ft	Wellholedepth:	325
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 570

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2000-04-14	62.40		1999-10-19	69.10	
1999-04-14	62.63		1998-10-21	56.73	
1998-04-15	44.51		1997-10-29	63.67	
1997-04-15	56.07		1996-10-08	62.17	
1996-04-23	44.21		1995-10-23	60.12	
1995-04-19	38.23		1994-10-20	65.05	
1994-04-18	55.28		1993-10-18	58.00	
1993-04-15	46.09		1992-11-20	74.18	
1992-07-01	56.81		1992-01-08	69.76	
1986-12-01	52.0		1986-11-01	50.0	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1986-08-01	46.0	
1986-06-01	46.0	
1986-04-01	47.0	
1986-02-01	52.0	
1985-12-12	52.5	
1985-11-01	53.0	
1985-09-03	52.7	
1985-07-01	51.7	
1985-05-10	53.0	
1985-04-01	50.7	
1985-02-01	49.2	
1984-12-03	52.5	
1984-10-01	56.5	
1984-08-01	56.6	
1984-06-01	52.2	
1984-03-01	47.9	
1983-12-01	45.7	
1983-09-01	35.8	
1983-07-01	36.0	
1983-05-02	36.3	
1983-03-01	32.9	
1983-01-03	44.4	
1982-11-01	49.2	
1982-09-01	49.5	
1982-07-01	47.7	
1982-05-03	48.0	
1982-03-01	48.9	
1982-01-02	54.0	
1981-11-02	51.0	
1981-09-04	55.0	
1981-07-02	54.0	
1981-05-02	50.0	
1981-03-03	53.0	
1981-01-02	55.0	
1980-11-03	55.0	
1980-09-02	53.0	
1980-07-02	48.0	
1980-05-02	27.0	
1980-03-03	32.0	
1980-01-02	67.0	
1979-11-02	66.0	
1979-09-01	57.0	
1979-06-01	52.0	
1979-04-01	50.0	
1979-02-01	65.0	
1978-12-01	56.2	
1978-10-01	58.0	
1978-08-01	57.4	
1978-06-01	45.0	
1978-04-01	33.2	
1978-02-01	74.8	
1977-12-01	69.2	
1977-11-01	69.0	
Note: The site had been pumped recently.		
1977-10-01	69.0	
1977-09-01	69.0	
1986-07-01	50.0	
1986-05-01	48.0	
1986-03-01	47.0	
1986-01-02	52.0	
1985-12-02	53.0	
1985-10-01	51.0	
1985-08-01	51.0	
1985-06-03	52.0	
1985-05-01	50.6	
1985-03-01	53.6	
1985-01-02	52.7	
1984-11-01	55.1	
1984-09-04	47.9	
1984-07-02	55.4	
1984-04-02	48.0	
1984-02-01	49.0	
1983-11-01	44.2	
1983-08-01	34.1	
1983-06-01	34.0	
1983-04-01	31.9	
1983-02-01	44.0	
1982-12-01	45.0	
1982-10-01	47.7	
1982-08-02	48.8	
1982-06-01	45.3	
1982-04-01	46.3	
1982-02-01	52.6	
1981-12-01	51.0	
1981-10-01	51.0	
1981-08-04	54.0	
1981-06-02	50.0	
1981-04-02	50.0	
1981-02-04	55.0	
1980-12-03	53.0	
1980-10-03	52.0	
1980-08-02	52.0	
1980-06-02	45.0	
1980-04-02	25.0	
1980-02-04	43.0	
1979-12-03	66.0	
1979-10-03	56.0	
1979-07-01	53.0	
1979-05-01	42.0	
1979-03-01	48.0	
1979-01-01	60.0	
1978-11-01	57.8	
1978-09-01	56.8	
1978-07-01	25.0	
1978-05-01	40.0	
1978-03-01	35.6	
1978-01-01	75.0	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1977-08-01	69.2	
1977-06-01	69.0	
1977-04-01	69.0	
1977-02-01	68.0	
1976-11-01	67.4	
1976-09-01	71.0	
1976-05-01	68.0	
1976-03-01	68.8	
1975-10-01	59.5	
1975-08-01	55.0	
1975-05-01	57.0	
1974-11-01	63.8	
1974-09-01	61.5	
1974-07-01	55.5	
1974-05-01	50.1	
1974-03-01	51.5	
1974-01-01	60.0	
1972-09-01	66.5	
1972-07-01	62.5	
1972-05-02	59.5	
1972-03-01	60.0	
1972-01-01	67.0	
1971-11-01	64.8	
1971-09-01	64.0	
1971-07-02	62.0	
1971-05-04	59.6	
1971-03-01	63.8	
1971-01-05	69.4	
1970-10-30	67.5	
1970-09-01	98.0	
1970-08-01	60.2	
1970-06-01	55.5	
1970-04-01	61.3	
1970-02-03	59.6	
1969-12-03	59.8	
1969-10-01	57.5	
1969-07-01	54.8	
1969-03-04	26.4	
1968-11-01	67.5	
1968-08-05	58.1	
1968-06-04	57.7	
1968-04-01	49.4	
1968-03-09	72.4	
Note: The site was being pumped.		
1968-03-05	49.0	
1968-02-02	70.4	
Note: The site was being pumped.		
1968-01-02	47.9	
1967-11-02	50.1	
1967-11	71.4	
Note: The site was being pumped.		
1967-10-02	50.0	
1967-10	68.4	
Note: The site was being pumped.		
1967-09-05	49.4	
1977-07-01	69.0	
1977-05-01	68.4	
1977-03-01	68.0	
1977-01-01	68.2	
1976-10-01	67.0	
1976-06-01	72.6	
1976-04-01	69.0	
1975-12-01	61.0	
1975-09-01	55.0	
1975-07-01	57.0	
1974-12-01	65.0	
1974-10-01	62.4	
1974-08-01	58.5	
1974-06-01	52.5	
1974-04-01	48.2	
1974-02-01	55.0	
1973-12-03	60.2	
1972-08-01	64.0	
1972-06-02	61.0	
1972-04-03	59.6	
1972-02-01	65.0	
1971-12-01	67.6	
1971-10-01	64.8	
1971-08-03	64.5	
1971-06-01	64.0	
1971-04-01	58.8	
1971-02-02	68.7	
1970-12-02	68.9	
1970-10-06	67.2	
1970-08-31	64.0	
1970-07-01	56.7	
1970-05-01	57.5	
1970-03-02	61.5	
1970-01-02	61.0	
1969-11-06	56.8	
1969-09-02	58.6	
1969-05-05	47.6	
1969-01-01	69.1	
1968-09-03	58.1	
1968-07-01	57.7	
1968-05-01	49.9	
1968-02-05	48.3	
1967-12-01	49.1	
1967-08-01	47.5	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1967-06-30	42.6	
1967-05-01	44.9	
1967-03-07	47.56	
1967-02-06	43.6	
1966-12-06	56.0	
1966-11-01	57.3	
1966-09-12	59.15	
1966-07-08	58.45	
1966-05-09	51.73	
1965-12-01	62.3	
1965-05-01	63.0	
1965-02-01	63.5	
1964-10-01	60.5	
1964-07-01	66.5	
1964-05-04	60.5	
1964-03-03	61.9	
1964-01-03	65.0	
1963-11-04	63.7	
1963-09-03	63.1	
1963-07-02	61.9	
1963-05-02	60.2	
1963-03-04	59.7	
1963-01-04	55.2	
1962-11-02	57.3	
1962-08-30	55.9	
1962-07-05	53.2	
1962-05-01	68.1	
1962-03-01	76.0	
1962-01-01	78.3	
1961-11-01	79.1	
1961-10-01	171.0	
Note: The site was being pumped.		
1961-09-01	73.0	
1961-05-04	68.1	
1961-03-06	67.3	
1961-01-06	66.7	
1960-11-03	65.8	
1960-09-08	64.3	
1960-07-08	61.6	
1960-05-05	61.6	
1960-03-01	58.0	
1959-12-31	57.0	
1959-10-30	54.4	
1959-08-31	53.4	
1959-07-01	49.1	
1959-05-04	45.6	
1959-03-06	48.1	
1959-01-07	46.3	
1958-11-05	45.7	
1958-09-02	42.4	
1958-07-07	40.2	
1958-05-05	32.3	
1958-03-05	56.8	
1958-01-01	56.4	
1957-11-04	54.1	

Date	Feet below Surface	Feet to Sealevel
1967-06-01	42.0	
1967-04-04	45.0	
1967-03-01	47.7	
1967-01-04	55.1	
1966-11-11	57.14	
1966-10-03	58.4	
1966-08-09	59.75	
1966-06-13	56.31	
1966-04-05	50.55	
1965-06-01	63.7	
1965-04-01	65.4	
1965-01-01	61.0	
1964-08-01	66.1	
1964-06-01	62.4	
1964-04-02	56.9	
1964-02-04	63.2	
1963-11-29	65.3	
1963-10-03	63.8	
1963-08-01	61.7	
1963-06-05	61.4	
1963-04-02	60.4	
1963-02-01	58.3	
1962-12-03	58.0	
1962-10-03	56.9	
1962-08-02	54.2	
1962-06-01	53.6	
1962-04-01	73.5	
1962-02-01	77.6	
1961-12-01	78.3	
1961-08-01	71.6	
1961-04-07	67.7	
1961-02-06	66.8	
1960-12-08	65.8	
1960-10-06	65.2	
1960-08-05	63.1	
1960-06-02	62.7	
1960-04-06	60.0	
1960-02-02	55.9	
1959-12-02	55.5	
1959-10-06	52.6	
1959-07-31	53.4	
1959-06-05	45.6	
1959-04-03	47.3	
1959-02-04	47.3	
1958-12-05	55.8	
1958-10-03	43.9	
1958-08-05	41.7	
1958-06-03	37.0	
1958-04-07	38.3	
1958-02-06	58.1	
1957-12-06	55.2	
1957-10-02	54.0	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1957-08-29	54.9	
1957-07-02	53.0	
1957-05-07	62.1	
1957-03-04	61.6	
1957-01-03	59.7	
1956-11-02	56.9	
1956-09-07	53.9	
1956-07-05	53.1	
1956-05-03	52.9	
1956-03-02	56.5	
1956-01-05	56.5	
1955-11-02	53.5	
1955-10-05	52.9	
1955-08-03	58.1	
1955-06-02	46.9	
1955-04-06	49.3	
1955-02-02	54.3	
1954-12-02	51.1	
1954-10-07	48.4	
1954-08-05	43.6	
1954-05-06	44.5	
1954-03-04	58.3	
1954-01-11	57.4	
1953-11-12	53.9	
1953-09-10	50.7	
1953-07-14	48.7	
1953-05-11	46.9	
1953-03-12	47.0	
1953-01-12	46.6	
1952-11-11	47.2	
1952-09-11	48.1	
1952-07-11	43.4	
1952-05-15	40.35	
1952-05-08	39.53	
1952-04-25	40.50	
1952-04-11	39.3	
1952-03-29	39.69	
1952-03-12	112.7	
Note: The site had been pumped recently.		
1952-03-02	46.63	
1952-02-11	54.8	
1951-12-11	69.64	
1951-10-16	70.2	
1951-08-13	121.7	
1951-05-14	73.2	
1951-03-13	68.4	
1951-02-09	72.4	
1948-01-13	54.8	
1947-11-13	53.7	
1947-09-13	50.9	
1947-07-14	46.8	
1947-05-14	44.0	
1947-03-13	40.4	
1947-01-13	44.3	
1946-11-14	49.4	

Date	Feet below Surface	Feet to Sealevel
1957-08-06	53.0	
1957-05-30	59.7	
1957-04-04	62.3	
1957-02-05	60.7	
1956-12-04	58.9	
1956-10-04	55.7	
1956-08-02	53.7	
1956-06-06	51.9	
1956-04-04	56.9	
1956-02-02	57.2	
1955-12-02	55.3	
1955-10-20	54.5	
1955-09-08	51.2	
1955-07-06	48.4	
1955-05-04	48.6	
1955-03-02	55.0	
1955-01-06	53.6	
1954-11-04	49.9	
1954-09-02	96.0	
1954-06-03	42.3	
1954-04-08	53.5	
1954-02-08	58.2	
1953-12-08	55.2	
1953-10-13	51.9	
1953-08-10	49.4	
1953-06-11	47.2	
1953-04-13	46.6	
1953-02-11	47.8	
1952-12-11	48.7	
1952-11-08	49.63	
1952-08-12	45.2	
1952-06-09	42.2	
1952-05-13	39.1	
1952-05-01	39.57	
1952-04-17	40.19	
1952-04-05	40.64	
1952-02-23	46.57	
1952-01-11	37.3	
1951-11-13	69.3	
1951-09-13	82.8	
1951-06-14	83.4	
1951-04-13	71.4	
1951-02-15	72.7	
1948-03-22	55.8	
1947-12-15	54.7	
1947-10-13	52.3	
1947-08-13	49.5	
1947-06-13	45.5	
1947-04-16	42.6	
1947-02-13	39.6	
1946-12-13	50.0	
1946-10-14	47.7	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1946-09-16	46.4	
1946-07-15	44.0	
1946-05-13	42.9	
1946-03-13	44.8	
1946-01-15	48.0	
1945-11-15	46.3	
1945-09-13	45.5	
1945-07-20	44.2	
1945-05-14	41.8	
1945-03-19	42.6	
1945-01-15	44.2	
1944-11-16	44.8	
1944-09-15	43.3	
1944-07-17	41.9	
1944-05-15	37.5	
1944-03-15	41.0	
1944-01-18	46.9	
1943-11-15	45.3	
1943-09-13	43.4	
1943-07-16	42.6	
1943-05-14	37.5	
1943-03-16	32.6	
1943-01-19	57.2	
1942-11-13	54.1	
1942-09-15	50.9	
1942-07-14	47.7	
1942-05-15	45.7	
1942-03-13	45.1	
1942-01-14	46.3	
1941-11-13	44.5	
1941-09-15	42.1	
1941-07-15	40.8	
1941-05-15	32.8	
1941-03-18	38.2	
1941-01-27	54.9	
1940-08-14	47.1	
1940-06-17	44.1	
1940-04-19	43.2	
1940-02-15	49.3	
1939-12-09	50.8	
1939-10-18	51.6	
1939-08-16	48.4	
1939-06-15	44.7	
1939-04-19	44.6	
1939-03-15	45.0	
1939-02-16	47.0	
1939-01-16	46.3	
1938-10-28	44.8	
1938-10-06	44.1	
1931-04-21	52.5	
1931-02-16	55.0	
1930-12-15	53.5	
1930-10-15	50.5	
1930-08-15	47.0	
1930-06-17	47.0	
1946-08-13	45.2	
1946-06-13	43.0	
1946-04-17	44.3	
1946-02-14	46.7	
1945-12-13	47.2	
1945-10-15	46.0	
1945-08-13	44.8	
1945-06-14	43.0	
1945-04-18	41.6	
1945-02-15	43.3	
1944-12-13	45.1	
1944-10-13	44.1	
1944-08-14	42.9	
1944-06-13	39.4	
1944-04-13	36.2	
1944-02-15	44.7	
1943-12-22	46.5	
1943-10-15	44.3	
1943-08-16	43.4	
1943-06-18	41.1	
1943-04-19	33.7	
1943-02-19	47.8	
1942-12-14	55.6	
1942-10-16	52.8	
1942-08-17	49.2	
1942-06-15	46.5	
1942-04-10	45.5	
1942-02-13	45.2	
1941-12-12	45.6	
1941-10-15	43.5	
1941-08-15	41.2	
1941-06-16	36.8	
1941-04-15	31.3	
1941-02-14	53.7	
1940-09-18	49.3	
1940-07-15	45.7	
1940-05-16	43.2	
1940-03-15	45.8	
1940-01-16	49.6	
1939-11-15	53.3	
1939-09-16	50.1	
1939-07-20	46.6	
1939-05-16	44.3	
1939-03-17	45.2	
1939-02-17	47.1	
1939-01-19	47.4	
1938-12-23	46.6	
1938-10-17	44.4	
1935-08-20	45.0	
1931-03-16	56.0	
1931-01-16	54.0	
1930-11-15	52.0	
1930-09-15	48.5	
1930-07-15	46.0	
1930-05-15	51.5	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1930-04-17	59.0	
1930-02-15	58.5	
1929-12-15	56.0	
1929-10-15	53.0	
1929-07-15	47.5	
1929-05-15	49.0	
1929-03-15	60.5	
1929-01-15	58.5	
1928-11-15	56.0	
1928-09-15	53.5	
1928-07-14	48.6	
1928-05-14	47.8	
1928-04-02	49.1	
1928-02-15	51.6	
1930-03-17	60.0	
1930-01-15	58.0	
1929-11-15	54.5	
1929-09-15	51.5	
1929-06-15	47.0	
1929-04-15	58.0	
1929-02-15	59.0	
1928-12-15	56.0	
1928-10-15	54.5	
1928-08-15	50.0	
1928-06-15	47.7	
1928-04-14	48.7	
1928-03-15	50.0	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92377	4	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN BERNARDINO COUNTY, CA

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.678 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX D: QUALIFICATIONS/INSURANCE

PARTNER

Nasim Ahmed, REA

Partner Associate

Education

Master of Science, Chemical Engineering - University of Southern California
Bachelor of Science, Chemical Engineering - BUET, Bangladesh

Registrations

California Registered Environmental Assessor (REA I- 08051)

Summary of Professional Experience

Mr. Ahmed has over 13 years experience in the environmental service industry. He is familiar with all aspects of Due Diligence Property Assessments and the needs and requirements of varied number of reporting standards, including the ASTM standard, EPA's All Appropriate Inquiry (AAI), and customized client formats. Mr. Ahmed is a certified AHERA Asbestos Building Inspector with experience developing and implementing asbestos, lead-based paint, PCB, and radon Operations & Maintenance (O&M) Programs. Mr. Ahmed has also performed Phase II Subsurface Investigations, Regulatory Compliance Assessments, and Limited Property Condition Assessments.

Mr. Ahmed has performed over 1,000 Phase I Environmental Site Assessments and Environmental Transaction Screens. He has provided daily client support and management of environmental, engineering and associated projects in the due diligence process. Some of his other client management duties have included assessment of current and potential collateral properties for applicable due diligence requirements, with "cradle to grave" client support of projects through loan closing (including addressing client concerns, comments and revisions). He has performed Phase I ESAs, Phase II Subsurface Investigations, and Regulatory Compliance Assessments on numerous multi-acre, multi-tenant industrial, commercial office, retail and multi-regional retail mall complexes, such as the Glendale Fashion Center, Howard Johnson Hotel and Rite Aid. He also has developed and implemented asbestos, lead-based paint, lead in water, and radon Operations and Maintenance (O&M) Programs.

Finally, Mr. Nasim's diversity across residential, industrial, and commercial environments is a major contribution to Partner Engineering and Science's Associate team in the Southwest region of the United States.

Shawn Askew
Staff Professional II

Education
Civil Engineering Technology Major, Southern Polytechnic State University

Training & Registrations
ASTM E1527 Phase I Environmental Site Assessment Course, 2003

Asbestos Inspector: EPA-Model Accredited Asbestos in Buildings: Inspection & Assessment Course (with current refreshers), from 2004

Lead-Based Paint Inspector: EPA-Target Housing & Child-Occupied Facilities Course (with current refreshers), from 2004

Mold Assessment and Remediation in Buildings Course, 2007

OSHA 40-Hour Hazardous Waste Operations Emergency Response (HAZWOPER) Course (with current refreshers), from 2008

Environmental Review Procedures for Responsible Entities Course, U.S. Dept. of Housing & Urban Development Region IV, 2008

Level 1B Erosion & Sediment Control Advanced Fundamentals, Georgia Soil & Water Conservation Commission, #0000058439, from 2009

Summary of Professional Experience
Mr. Askew has eight (8) years of experience in the environmental and engineering service industries. He has significant experience in due diligence assessments for a variety of property types and the needs and requirements of varied number of reporting standards, including ASTM standards, EPA's All Appropriate Inquiry (AAI), and customized client formats. Specifically, Mr. Askew has performed Phase I Environmental Site Assessments, Environmental Transaction Screens, Phase II Subsurface Investigations, Remediation Design projects, Property Condition Assessments (PCAs), Small Loan PCAs, Construction Progress Monitoring, Asbestos Surveys, Lead-based Paint Surveys, Radon Studies, Mold Assessments, and Lead-in-water sampling and analysis. Mr. Askew has performed over 250 Phase I Environmental Site Assessments in twenty-four (24) states.

Mr. Askew served as a project manager on large industrial sites involved with Brownfield initiatives for transfer, sale, and redevelopment of several closed industrial facilities in the state of Alabama. Duties included strategy and planning of future redevelopment of property based on current environmental conditions and determination of proper remedies required based on future use or conceptual development and construction scenarios. Duties also included working with legal counsel to review sale agreements to assure conditions of sale matched the selected

remedies at the sites as well as technical management during the assessment, remediation design, and remedial implementation activities at the sites.

Mr. Askew has been involved with conceptual design, feasibility studies, treatability studies, construction design, and implementation of construction activities associated with several remediation projects including soil and groundwater treatment systems, surface water sediment removal and stabilization, and design and inspection of construction and demolition site storm water best management practices (BMP).

Mr. Askew has also served as a project manager on several municipal separate storm sewer system (MS4) inventories in the state of Georgia. Duties included direction and advice for field surveying crews, oversight of GIS cartography, inspection of highly visible pollutant sources, determination of municipal maintenance priorities, and compilation of annual municipal National Pollutant Discharge Elimination System (NPDES) reports to the Georgia Environmental Protection Division (EPD).

Finally, Mr. Askew's diversity across residential, industrial, municipal, and commercial environments is a major contribution to Partner Engineering and Science's team in the Southeast region of the United States.

Mark Lambson
Principal

Education
Bachelor of Arts Degree, Public Administration and Economics.
San Diego State University

Affiliations
National Association of Real Estate Investment Trusts (NAREIT)
International Council of Shopping Centers (ICSC)
U.S Green Building Council (USGBC)
San Diego Habitat Conservancy, Board of Directors

Summary of Professional Experience
Mr. Lambson is a true veteran of the commercial real estate services industry. He has over 16 years of experience managing and performing environmental and engineering consulting projects on a national level. Mr. Lambson serves as a Principal for Partner - and is located in Partner's San Diego office. Mr. Lambson currently provides client management and consulting to a nationwide client base - and specializes in advising "equity" clients during the acquisition phase of commercial property transactions in the U.S., Mexico, and Canada.

Mr. Lambson has assisted clients on over 9,000 commercial real estate transactions throughout his career. His due diligence résumé includes experience at all levels, and includes advising REITs, developers, property managers, retail companies, commercial brokers, mortgage brokers, attorneys, lenders, and real estate investment groups with the following nationwide services:

- Property Condition Assessments (PCAs)
- Individual Building System Inspections for Roof, Mechanical Electrical Plumbing (MEP), Elevator, Structural, Façade, and ADA
- Phase I Environmental Site Assessments (ESAs)
- Phase II Subsurface Investigations (Soil and groundwater sampling and analysis)
- Phase III Remediation Services
- Asbestos, Lead, Radon, Mold Sampling
- Environmental Transaction Screens
- Seismic Assessments (PMLs)
- Energy Audits, Benchmarking, and LEED-related services
- Fannie Mae / Freddie Mac / HUD Due Diligence
- Geotechnical
- Zoning Reports
- ALTA Surveys

Project Experience

Building Sciences

- Property Condition Assessment, MEP Report, Roof Report, Elevator Report, Structural and Seismic Assessment for a high-profile Class A office campus acquisition in the Bay Area
- ADA Compliance Review for a 400-unit apartment complex in Southern California
- Fannie Mae Property Condition / Physical Needs Assessment services for a 5400-unit multifamily portfolio in Nevada

Environmental Assessments

- Phase I and Phase II Environmental Assessments for a 75-acre aerospace facility in the Northwest United States
- Over 500 Phase I Environmental Site Assessments for a national fast-food chain
- Environmental consulting for over 1 million acres of desert land in California, Nevada, and Arizona

Land Surveys

- ALTA Surveys for 2400-unit apartment portfolio in the Midwest

Multi-Site Portfolios

- 113-site office portfolio acquisition for a national REIT
- 122-site hotel portfolio for a national lending institution
- 55-site hotel portfolio acquisition for a private investment group
- 68-site healthcare portfolio acquisition for a national REIT

Energy and Water Efficiency

- Energy & Water consulting for a national property owner that operates and manages 30 retail and office centers on the West Coast and Texas

International

- International experience performing acquisition due diligence projects in all 50 states, Mexico and Canada

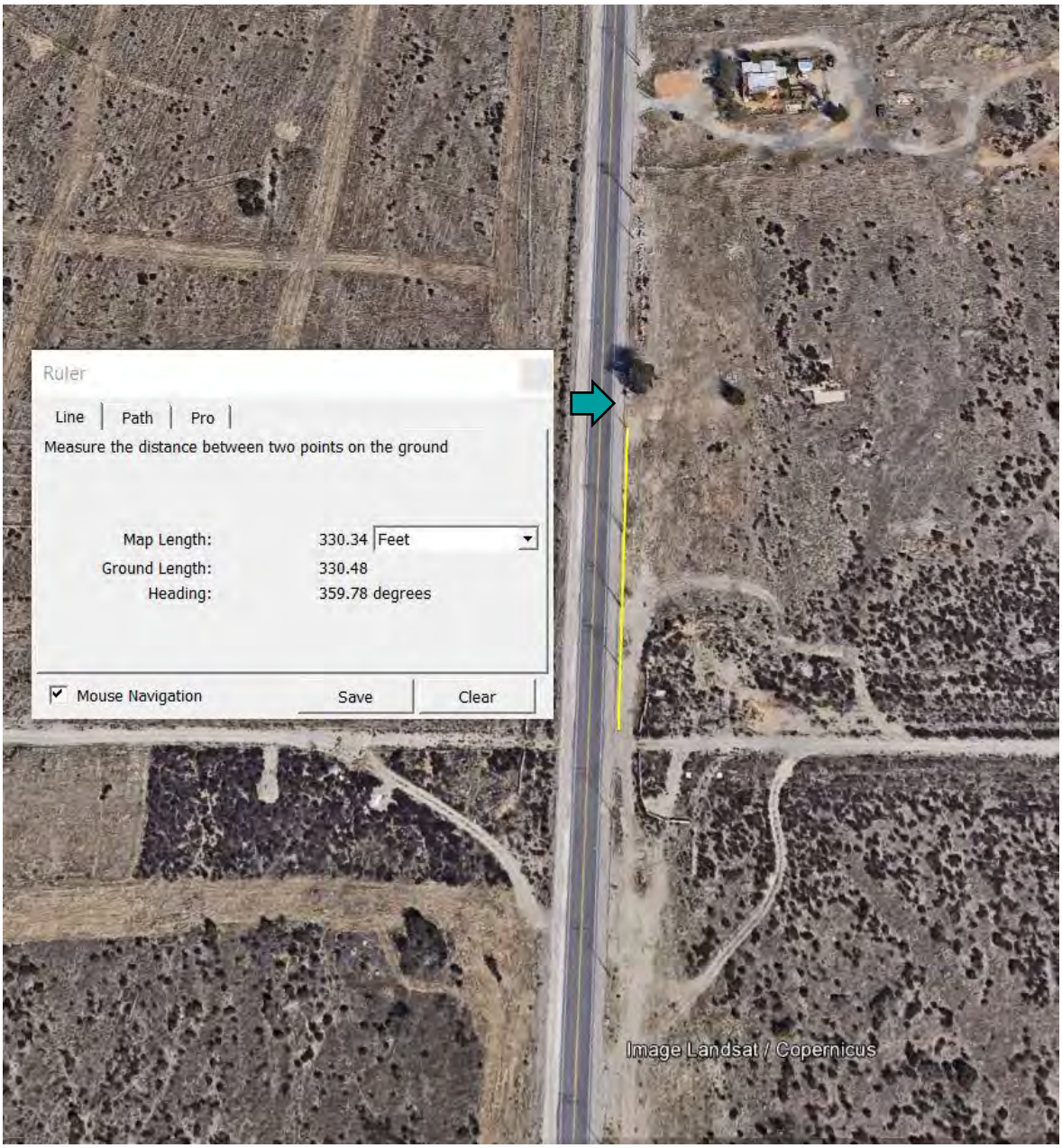
In addition to conducting many types of transactions, Mr. Lambson has provided services on many types of property, including, but not limited to:

- Multifamily
- Student Housing
- Condominiums
- Office
- Retail
- Health Care
- Medical Office Buildings
- Restaurant
- Convenience Stores
- Hotel
- Industrial
- Flex/Warehouse
- Distribution Centers
- Manufacturing
- Life Sciences
- Aerospace
- Vacant Land
- Golf Courses
- Country Clubs
- Self Storage
- Day Care Facilities
- Religious
- Solar and Wind Energy
- Telecommunication Towers
- Schools and Universities
- Government Buildings and Property

Mr. Lambson takes pride in his work, and is always available to be of assistance to his clients. Being responsive, thorough, and detail-oriented helps Mr. Lambson to maintain longstanding professional relationships with his local and nationwide clientele.

S & S Commercial Environmental Services, INC.

Ph (949)650-4994 Fax (909)498-0302 e-mail s.quart@verizon.net s.quart@att.net



Top: North Side of Subject Property
Bottom: South Side of Subject Property

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT
APN 023915122
330 Feet North Of NE Corner of N Sierra Avenue and W. Casa Grande Drive
Fontana, CA 92336

6693 Moonriver Street Eastvale, CA 91752

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LENDER-CLIENT PRIVILEGE WORK PRODUCT

ATTN: WEINER FAMILY REVOCABLE TRUST
C/O Gerald W. Beard Realty, Inc.
285 W. Rialto Avenue
Rialto, CA 92376

RE: Phase I Environmental Site Assessment **N 34-9-32, W 117-26-7 (NAD 83)**
APN 023915122 **34.158838, -117.435362**
330 Feet North of NE Corner N Sierra Avenue
and W. Casa Grande Drive
Fontana CA 92336

1.0 INTRODUCTION

This report presents the results of our Phase I Environmental Site Assessment performed on the subject property known as 330 Feet North of NE Corner N Sierra Avenue and W. Casa Grande Drive in the City of Fontana in San Bernardino County, California. There were no Special Conditions for this Report. The User is the addressee above.

The site inspection was performed on Thursday November 16, 2017.

A Preliminary Title Report was provided by the Client to review for Environmental Liens. None were identified in that report.

This report relies in part upon a study done of base closures prepared by Science Applications International Corporation for the U.S. Army Corps of Engineers Los Angeles District in 2004. A map from that report with the former storage area superimposed is in 12.3 Topographic Map in the Appendix and shows the subject property and adjoining and adjacent properties north, south and directly east outside the area of concern.

The subject property was on the western edge of the Rialto Ammunition Back-Up Storage Point (Rialto Military Reservation) from 1941 until 1945 when the Rialto Military Reservation was declared excess and sold off over the next couple of years. The first mention of the subject property according to the title report is in 1947 when it was quit claimed by the United States to Paul Kenda and Theresa Kenda, his wife, dated April 26, 1947. It is shown as a residential property in 1953 and remained as such until recent years when the residential structure was demolished and the land became vacant land with concrete foundation only for the former residence. There appears to have been ancillary buildings such as a garage which are no longer physically evident.

Based upon all that was learned during the research, no Environmental Liens are expected.

Current State of California & Federal Agency Web Data Reviewed For This Report

*	Cal-EPA	Envirostor
*	Regional Water Quality Control Board	Geotracker
*	Dept of Conservation (DOGGR)	Div of Oil & Gas
*	SCAQMD	Finds

No *Significant Data Gaps* were identified. Greatest reliance was on Building Records with the San Bernardino County Assessors Office, Base Closure Report and Historical Aerials.

Cross Streets Directories were not reviewed for known occupancies due to the known occupancies of the subject property.

Sanborn Fire Insurance Maps were not available for the completion of this report as they were discontinued before property development. (See appendix)

An Underground Tank Research Request was not submitted due to the known activities on the subject property since the early 1900's and lack of any indicators for underground storage tanks in operations.

De Minimis Environmental Conditions include environmental concerns identified by S&S that warrant discussion but do not qualify as RECs, as defined by the ASTM Standard Practice E1527-13. S&S's assessment did not reveal any significant De Minimis environmental conditions associated with the subject property or nearby properties.

S&S's Assessment includes a review of as built drawings and specifications printed on the drawings and permits used in the construction of the buildings as available. This review and site inspection related to Scope Considerations and Non-Scope Considerations or De Minimis Environmental Conditions associated with the subject property or nearby properties including asbestos containing materials, radon, lead-based paint, lead in drinking water, mold, flood plain and unsatisfactory indoor air quality that were further inspected with the results in 2.0 Principal Findings.

Stormwater is the responsibility of the County of San Bernardino. Stormwater soaks into or runs off the subject property then into the County of San Bernardino stormwater system.

This report is intended to satisfy the requirements of a Phase I Environmental Site Audit as outlined in the ASTM E-1527 2013, ASTM 2600 -15 Standards, the EPA "*All Appropriate Inquiries"* November 2006 ruling, and the SBA May 1, 2015 Requirements.

Report Organization

This report is divided into sections which discuss the field investigation, government records search, regulatory agency contacts and recommendations. Appendices follow the text

1.1 Purpose and Scope of Work

The purpose of a Phase I Environmental Site Assessment is to discover any past or present environmentally-related events which may negatively impact the subject property. This includes a search of all available records concerning the property and the performance of an on-site inspection. Procedures followed in the performance of a Phase I Environmental Site Assessment include executing a government records search, researching permits for the site where prudent, interviewing the tenants of the subject property or neighbors in close proximity, studying aerial photographs, interviewing personnel at the appropriate regulatory agencies and conducting a physical survey of the subject property.

1.2 Involved Parties/Information Sources

This ***S & S Commercial Environmental Services, Inc.***, Phase I Environmental Site Assessment is produced through the efforts of an Environmental Professional EPA CFR Title 40 Section 312.22, working in conjunction with Federal, State and county regulatory agencies. *Environmental Research Records* maintains a comprehensive, computerized data base of pertinent, environmentally-related records, known as an *ERS Report*, which is updated on a regular basis. This data base is researched for Category I, II, III and IV sites within a mile of the subject property and a report is generated based upon the available regulatory records. The report is reviewed for sites that might impact subject property. Inquiry is directed toward sites within a 2,000 foot hazardous waste disclosure zone.

The field investigation includes a site assessment, observations of the neighboring facilities and verification of permits and building records, as necessary.

A Google search was the only Other Historical Source used (ASTM §8.3.4.9) due to the nature of the former parcel and the other information available to determine history of use.

The 2006 EPA "All Appropriate Inquires" provides for a determination by the Environmental Professional CFR Title 40 Section 312.22 as to what records are necessary to understand a subject property history and the potential for Environmental Problems. The ASTM 1527 2013 Standard provides a list of possible sources of information for the Environmental Professional to use to determine that history.

Property tax records (ASTM §8.3.4.3) and Zoning/Land use records (ASTM §8.3.4.8) were not considered significant sources for information due to the known history of the individual parcel making up the subject property, the known current and former occupants and the building permit history. (ASTM §8.3.4.7)

Recorded land title records (ASTM §8.3.4.4) are part of a Title Report which was requested as part of the contract and is the Clients Responsibility per ASTM 1527- 2013 Standard. The new standard states in summary that in order to satisfy AAI, a user must conduct a search for the existence of environmental liens or AULs that are filed or recorded against the property.

While not provided, a Full Title Report was not deemed necessary by this Environmental Professional to evaluate the environmental status of the property based upon the information identified in the research for this report.

Definitions modified and added in the ASTM-1527 2013 Revision as approved by the EPA include:

a. Simplified Recognized Environmental Condition (REC) definition to "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

b. Stated a Limitation on the definition of an HREC (historical REC) to closed RECs that have been completely resolved ("clean closure") with no restrictions. Those undergoing continued maintenance or monitoring should be discussed.

Also for HREC's, if there has been a change in the regulatory criteria and if the Environmental Professional (EP) considers this past release to now be an REC at the time the Phase I ESA investigation is conducted,"... the condition shall be included in the conclusions section of the report as a REC."

c. Review of Title and Judicial Records for Environmental Liens or Activity and Use Limitations (AULs) continues to be a User (Client) requirement that is to be conducted by a Title professional, not the EP or Phase I Professional. Buyer or Lender needs to ensure that Title companies are searching judicial records.

d. (VES) Vapor Encroachment Screening under E2600-15 is a referenced document in E1527 2013 under Section 2.1. Under this Standard Vapor migration should be treated no differently than the way contaminated groundwater migration is considered in a Phase I ESA and should be discussed using the CERCLA definition of "release" and "environment" which includes vapor.

Section 2.1 of ASTM E1527 Standard - Vapor Encroachment Screening - 42 U.S.C. § 9601(22) defines a "release" as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant" This includes solid, liquid and the ensuing migration of vapor into soil and water or from water upwards through soil occupied areas.

There were no Vapor Encroachment Issues Identified on within a significant distance to the subject property. The former ammunition storage area to the east was found to be a secondary source of storage of ordnance with no work an minimal off loading prior to shipment to the port.

2.0 PRINCIPAL FINDINGS

2.1 Summary of Operations and Environmental Discrepancies

General Historical Operations

The subject property was agricultural or vacant land until 1941 when it became part of the Rialto Ammunition Back-Up Storage Point (Rialto Military Reservation).

The subject property was located on the west side of the Rialto Military Reservation west of the ammunition dump according to Final Report of Operational History 1941-195 - Rialto Ammunition Back-Up Storage Point RIALTO, CALIFORNIA Prepared for U.S. Army Corps of Engineers Los Angeles District in 2004 by Science Applications International Corporation.

The Rialto Military Reservation was subdivided over the next few years with the first notice in the preliminary title report... ”Quitclaim Deed from the United States of America, to Paul Kenda and Theresa Kenda, his wife, dated April 26, 1947 and recorded May 3, 1947 in Book 2050 Page 217 official records recites.

"Subject to easements and rights of way now existing or reserved; and subject, also, to a reservation of all structures, fences, railways, trackage, electrical and telephone systems, and other improvements constructed or erected by the United States, together with the right to remove such structures, fences, railway trackage, electrical and telephone systems, and other such improvements."

The easement across the subject property is as follows: “An easement for the purpose shown below and rights incidental thereto as set forth in a document: Purpose: pole lines Recorded: in Book 3024 and Page 253, of Official Records. Affects: described as follows: Beginning at a point on the East line of Sierra Avenue, as the same now exists, distant 370 feet North of the South line of the Southwest 1/4 of the Northwest 1/4 of said Section 20, thence East parallel with the South line of the Northwest 1/4 of said Section 20, 357 feet.”

The 1953 Historical Aerial Photograph in the appendix shows a house on the subject property with vacant land around the subject property and a second residence further north. No other operations were noted.

Current Operations

The subject property is a vacant parcel with a concrete foundation for the former house only and a few piles of debris and a couple of old asphalt roofing shingles. There are no regulated materials used or generated on site.

Neighboring Properties
North is a vacant parcel then a single family home.

East is vacant land.
Former Operations To The East Of The Subject Property (1941 - 1945)
The subject property was on the western border of the "...Rialto Ammunition Back-Up Storage Point [which] served as an inspection and storage facility for ordnance-loaded railcars until they were dispatched to Victory Pier at the Los Angeles Port of Embarkation, where ordnance was loaded onto ships sailing for the China-Burma-India Theater of War (83). Storage of ordnance-loaded railcars at the Rialto Ammunition Back-Up Storage Point enabled the number of ordnance-loaded railcars at Victory Pier to be kept to a minimum..".

West is N. Sierra Avenue then vacant land.

South is vacant land.

There were no operations indicated currently on or off-site which would be related to environmental discrepancies.

2.2 Summary of Building Materials and Environmental Discrepancies

Building Materials - The subject property was constructed as a residential home in the late 1940's with the superstructure having been removed leaving only a concrete pad.

The following section regarding asbestos and Pcb describes the current status of asbestos and Pcb for any future construction.

2.2.1 Asbestos

Background - Asbestos is a natural occurring mineral fiber utilized in a multitude of building material products due to its high tensile strength and excellent fire resistant properties. The *EPA* has defined asbestos-containing materials as being either *friable* or *non-friable* materials. *Friable* material is defined as being easily broken or crushed by hand pressure (e.g., soft acoustical ceilings or blown-on fireproofing).

Non-friable asbestos is generally found in pre-manufactured products that bind the asbestos in an adhesive material, such as roofing felts, floor tile, transite pipe and mastics. This is significant, due to the ability to create a fiber release and cause human exposure during normal activities. The *EPA* currently does not require the removal of asbestos-containing materials that do not present a problem for human exposure. Most *friable* asbestos-containing materials were banned in building materials by 1978 with stocks on shelves allowed to be sold until 1980.
In October 1995, a new *FED-OSHA* ruling became effective which redefined building materials perceived as asbestos-containing into four classes of work and modified the ay in which these asbestos-containing materials are handled.

Under this ruling, "thermal system insulation and sprayed-on or troweled on or otherwise applied surfacing materials installed before 1980 are considered PACM (presumed asbestos-containing material)" unless sampled and identified by a certified individual as to asbestos content. These materials are considered high risk for abatement and their removal is classified under Class I removal activities.

Other building materials such as "floor or ceiling tiles, siding, roofing, transite panels [floor sheeting, floor or roof mastics] are also considered PACM (presumed asbestos-containing material)" unless sampled and identified by a certified individual as to asbestos content but are considered low risk materials for abatement and their removal is classified under Class II, III and IV removal and repair and maintenance operations.

Significant under these new regulations is the deletion of the category of "Small Scale Short Term Duration" removal activities which regularly allowed Class I, II, III and IV activities to proceed with less regulatory oversight.

In July 1996, *CAL-OSHA* adopted the *FED-OSHA* guidelines as part of California law subject to some of the more stringent requirements pre-existing in California under Prop 65, the Conelly Bill and various other requirements or legislation passed by the California legislature.

Under the *NESHAPS* laws of 1976 and as later amended, asbestos does not have to be removed from a facility until such time as it undergoes major renovations or is demolished. Until that time, the present emphasis by the *EPA* is to recommend repair of any damaged areas and management of the asbestos-containing materials.

Prior to any renovation work being done involving asbestos-containing materials of 260 linear feet or 160 square feet in area, the local branch of the *EPA* must be notified.

Prior to the demolition of any building or house, mandatory bulk sampling must be accomplished and, if asbestos is present, notification must be made to the local branch of the *EPA* and *Air Quality Management District*.

In California, for the removal of any asbestos-containing materials greater than 0.1% by weight, notifications must also be made to *CAL-OSHA* and a licensed contractor with an asbestos certification is required for any work which exceeds 100 square feet.

2.2.2 Building Materials Presumed to Contain Friable Asbestos

Friable asbestos-containing building materials were banned for manufacture and sale in the United States in 1978 and all stocks remaining on the shelves are presumed to have been used up by 1980. There are no buildings and no friable asbestos on the subject property.

2.2.1.2 Building Materials Presumed to Contain Non-Friable Asbestos
Asbestos was never banned from use in building materials such as floor tile, cement-based products and roofing materials, as these materials were considered *non-friable* by the *EPA* and not potentially a great hazard. After *friable* asbestos was banned, significant labeling requirements went into effect for the *non-friable* asbestos-containing materials and many substitutes became available. Asbestos-containing flooring materials and mastic were used less and less in construction after 1978 and, by 1984, their use in buildings constructed in the United States was nearly non-existent due to the labeling requirements and potential liability to both the manufacturer and real estate developer. Building materials presumed to contain *non-friable* asbestos are as follows:

Floor Tiles - There are no floor tiles on the subject property which are presumed to contain *non-friable* asbestos.

Roofing Material - There is no roof and no presumed *non-friable* asbestos.

2.2.2 Radon
The real property at 330 Feet N of the Northeast Corner of N Sierra Avenue and Casa Grande Drive Fontana, CA in a Radon Zone "2" and no Radon Exposure Issues are expected.

EPA Radon Zone: 2 (Predicted avg for county: 2 to 4 pCi/L)

(Predicted avg for county: 2 to 4 pCi/L)For zip code 92336:
Number of tests per zip code: 3
Number of tests where radon is > 4 pCi/L: 0
Percentage of test where radon is > 4 pCi/L: 0.00%

2.2.3. Lead Paint
Paint containing more than 0.06% (by weight of dried product) lead was banned for residential use in the United States in 1978 by the U.S. Consumer Product Safety Commission (16 Code of Federal Regulations CFR 1303).

There are no structure and no lead paint is expected.

2.2.4. PCB Poly Chlorinated Bi Phenyl
Pursuant to 40 CFR 761.2(a)(2), mineral oil-filled transformers which were manufactured prior to July 2. 1979, whose PCB concentration is unknown, and mineral oil-filled transformers whose date of manufacture is unknown, must be assumed to be PCB contaminated containing > 50 ppm PCBs, but < 500 ppm PCBs.

All pole-top and pad mounted distribution transformers manufactured before July 2. 1979, must be assumed to be mineral-oil filled containing Pcb. Pcb was outlawed for use in Transformers and Florescent Light

Fixture ballasts in 1978/79. There are no florescent light fixtures on the subject property and no pcb.

.

Southern California Edison supplies power to Fontana, CA. SCE has replaced any pcb in existing transformers in their system or never specified their use.

2.2.5. Lead In Drinking Water

A prohibition on lead in plumbing materials has been in effect since 1986. As there are no buildings, lead in valves is not suspected on the subject property.

2.2.6. Mold

Mold results from rainwater intrusion and from leaking plumbing pipes. Mold was not seen and is not an issue.

2.2.7 Flood Plain

Panel: 06071C7920H, Effective Date: 8/28/2008
Zone X - Area of minimal flood hazard, usually depicted on FIRMs as above the 500- year flood level.

2.2.8. Wetlands

The subject property is not part of any National Wetlands Inventory and no Wetlands were noted on the subject property during the site inspection.

2.2.9. Indoor Air Quality - Subjective

No unsatisfactory indoor air quality was identified via Olfaction (smell) in occupied areas and areas of ceiling damage. There were no areas identified in this research of concern for Unsatisfactory Indoor Air Quality from chemicals, gases or regulated materials being used on or off site, present from past activities or building materials used in construction of the building complex.

2.2.10 Condition of Onsite & Surrounding Vegetation

The onsite and surrounding vegetation were brown from lack of water only and not stressed by corrosive chemicals or chemicals.

2.2.11 Underground Tanks

There were no underground tanks or vessels noted on or adjoining the subject property or in a significant distance of the subject property.

22. 12 (VES) Vapor Encroachment Screening

Vapor Encroachment Screening did not identify any potential sources of vapor contamination on the subject property or in the EPA 100 foot Vapor Encroachment Zone. See Appendix Section 12.9.

3.0 SITE OVERVIEW

3.1 Location

The subject property is located on the east side of N. Sierra Avenue north of West Casa Grande Drive, the 210 Foothill Freeway and east of Citrus Avenue in the City of Fontana located in San Bernardino County California.

The land use in the general area is commercial, recreational and residential.

3.2 Adjacent Properties

North is vacant land then a residential home.

East is vacant land then single family homes.

South is vacant land.

West is N Sierra Avenue then vacant land.

There were no operations indicated currently on or off-site which would be related to environmental discrepancies for the subject property.

There were no current emissions noted from any of the adjacent or adjoining properties during the site inspection which would be of concern for the subject property.

3.3 Site Description

The subject property is an rectangular shaped property approximately 21,120 Sq ft in area with a concrete foundation for a former small house on the subject property. There are two trees on the west side of the property which appear to have been part of a former entry to the subject property. There was one asphalt shingle noted, a few piles of debris consisting mostly of rocks and dirt and an old domestic sprinkler hose.

There was nothing of significance environmentally.

4.0 SITE HISTORY AND OPERATIONS

4.1 Building Permit History

No building permits were identified for the subject property.

4.2 Operations

Former Operations - The subject property was vacant then vacant land on the south western edge of a military reservation from 1941 to 1945 then residential from 1947 until the past few years.

The history of the Rialto Military Reservation from the Science Applications International Corporation 2004 Report are as follows:

- 31 December 1941-9 February 1942: acquisition of2814.55 acres of land near Rialto (southwestern edge N. Sierra Avenue and location of subject property)
- February 1942, onwards: improvements made to construct the igloo storage area, classification yard, and administration buildings.
- 16 November 1942: Rialto Ammunition Back-Up Storage Point is activated.
- 2 December 1942: operations begin with the first railcar received.
- January to August 1943: storage of small arms ammunition in the igloos for DTC operations in the Mojave Desert.
- May 1944: 220 railcar holding area constructed.
- 30 November 1944: 7 .6 acres acquired as a no-fee easement for railroad spur.
- September 1945: operations cease.

- 16 October 1945: Rialto Ammunition Back-Up Storage Point put on "caretaker" status.

- 13 November 1945: Rialto Ammunition Back-Up Storage Point declared surplus by the Army Service Forces and transferred to the War Assets Administration for disposal.

- 9 July 1946: the Farm Credit Administration assumed custody and responsibility for disposal of the land and improvements.

April 28, 1947 the subject property is quit claimed to Paul Kenda and Theresa Kenda who built a residence.

The property is expected to have been on a septic system with seepage field. There was no indication that waste other than domestic waste was discharged into the private sewer.

Current Operations - The property is currently vacant There were no uses identified using regulated materials.

4.3 Operational Permits, Manifests and Material Safety Data Sheets (MSDS)

EPA ID Number - An *EPA* ID number identifies a facility to the State and Federal governments as a hazardous waste generator. There is no record of waste being removed from the subject property and no RCRA numbers.

Hazardous Waste Manifests - A hazardous waste manifest file is maintained when hazardous materials are transported and disposed of from a site. There are no regulated materials being used on the subject property and no manifests for this report.

Air Emissions - The *South Coast Air Quality Management District* issues permits for sites that are emitting hazardous waste into the atmosphere from their operations. According to Find there is no record of permits for the subject property.

Material Safety Data Sheets (MSDS) - Material Safety Data Sheets are required for chemicals and products being used in businesses which may be of a hazardous nature. There are no regulated materials being used on the on the subject property and no MSDS for this report.

5.0 ENVIRONMENTAL SETTING

5.1 Regional Physiographic -

The subject property is at an elevation of around 1754 feet above sea level, according to the Devore 7.5 minute US Geological Survey Map section in the appendix.

The surficial alluvium underlying the site is composed of alluvial fan deposits derived from basement rocks of the San Gabriel Mountains. The thinner upper layer (200+ feet) consists of undifferentiated younger alluvium, overlying a thicker sequence (1,100+ feet) of older semi-consolidated sediments (*DWR*, 1970).

The site is located in a seismically active region with active faults within 30 miles: San Andreas, San Jacinto, Cucamonga, Glen Helen and Whittier-Elsinore fault zones. The San Jacinto fault and Cucamonga fault zones are within three miles of the site. No active or potentially active faults have been identified on the site

Rocks beneath the surficial alluvium are comprised of semi-consolidated terrace deposits, underlain by a thick sequence (2,000+ feet) of folded and faulted sedimentary rocks known as the San Timoteo beds. Beneath the San Timoteo formation is a series of well-stratified beds of marine sandstones, shales, conglomerates and lava flows that reach a thickness of 24,000 feet in the extreme western portion of the Chino Basin. The basement rocks underlying the basin structure are a complex of crystalline metamorphic and plutonic rocks of granitic composition (*DWR*, 1970).

Hydrogeology -

The hydrogeology of the site is complex and incompletely characterized. Depth to groundwater at the site is about 300 feet below ground surface, and flow is to the south and southeast. The site lies within the Upper Santa Ana River Watershed in the Rialto-Colton groundwater basin. Horizontal groundwater flow from the basin is impeded by the San Jacinto Fault which separates the basin on the northeast from the Lytle and Bunker Hill Basins, and on the northwest, southeast, and southwest by groundwater barriers which have been identified from large groundwater elevation differences historically measured in groundwater production wells.

5.2 Soil Conditions

Soil at the site is typical of alluvial fans and terraces with surface soil and subsoil mostly sandy silty clay, with gravel washed from Lytle Creek with no significant uses identified in the property history. There are no wetland issues.

There were no contours, mounds or anomalous conditions to indicate the disposal of regulated materials on-site.

There were no operations noted on the subject property past or present which would indicate contamination.

Soil Type: (USDA Soil Survey Geographic Database) (SSURGO)
Soboba gravelly loamy sand, 0 to 9 percent slopes
Map Unit Type: Consociation, Hydric: No
Drainage Class: Excessively drained
General Information: Sandy-skeletal, mixed, thermic Typic Xerofluvents

5.3 Groundwater Conditions

Groundwater is expected around 300 feet. No groundwater testing was included in this report. There does not appear to have been any operations on or adjacent to the subject property which would indicate problems.

6.0 RESULTS OF INVESTIGATION

6.1 Site Inspection Observations

The subject property is a vacant parcel with sand, gravel, some vegetation and dirt. There was nothing significant environmentally to indicate problems with the subject or surrounding properties.

6.2 Regulatory Agency Contacts

6.2.1 Fontana Water Company

The Fontana Water Company was previously contacted concerning the water depth and supply in the area. It was found that the first potable water is at about 600 feet, the first depth from which they draw water from their wells. Mr. Carlos Simbres of the Fontana Water Company said that the water to be supplied to the subject property comes primarily from three different areas: Lake Silverwood via the California Aqueduct, groundwater wells and canyon water sources. He said that this water is blended with Metropolitan Water District water due to the high nitrate content.

Mr. Simbres stated that the Fontana Water Company tests all wells on a regular basis to assure conformance with Title 22 regulations to make sure that all water supplied to end users meets the State of California's drinking water quality standards.

6.2.2 California Department of Conservation, Div of Mines and Geology

The *California Department of Conservation, Division of Mines and Geology*, was contacted regarding the proximity of active earthquake faults. The subject property

is not part of any special studies zone pursuant to the Alquist-Priolo Earthquake Fault Zones Act of 1972, which mandated studies of active faults in California. An active fault zone is described by the *State Mining and Geology Board* "as one which had surface displacement within the Holocene time (about the last 11,000 years)."

6.2.3 California Division of Oil and Gas

A review of the *State of California Division of Oil and Gas* Maps did not indicate that oil wells were drilled within a mile of the subject property. It does not appear that any wells were surface-drilled into the subject property. (See DOGGR map section in appendix)

6.2.4 Southern California Edison Company

Mr. Don Garza, Service Planner, was previously contacted concerning Pcb oil in pole and pad-mounted transformers in the area. He said that it is unlikely that any Pcb are present in the transformers, as they were never specified. He stated that *Southern California Edison* would be happy to test any transformers for a fee.

6.2.5 South Coast Air Quality Management District (SCAQMD)

Find was researched regarding air emission permits on the property. There were no permits or applications identified for the subject property.

6.2.6 Department of Health Services, State Department of Radon

Mr. David Quinton, Environmental Health Specialist with the *State Department of Radon*, was contacted regarding the presence of radon in the area. He said that the most recent studies done predicted less than 2.4% of homes and less than 0.04% of the schools in the State of California would be over the *EPA's* action level of four picocuries/liter. He stated that this study was performed in existing homes and that there was no effective methodology of correlating soil samples to houses. Mr. Quinton explained that much is dependant upon the soil under a residence and the type of foundation a house is built upon. Additionally, the standard is based upon exposure of 18 hours per day for 70 years, which would not correlate to a business exposure. Mr. Quinton said that, with the exception of Madera County in Northern California, the *State of California* has nearly concluded all radon testing in the State and has found that there is little likelihood of a significant radon exposure in California.

Mr. Quinton said that business exposures had not been within the parameters of any of these studies due to the limited time most business people are in one location. He also said that the State does not plan to study businesses based upon the previous studies and that there is no standard for a commercial enterprise being conducted outside of a home.

EPA Radon Zone: 2
(Predicted avg for county: 2 to 4 pCi/L).

6.2.5 San Bernardino County Assessor Records, Orange Coast Title

According to the preliminary title report the subject property was re-surveyed in 1975. The subject property was transferred to DELEON, ANDREW J; DELEON, SYLVIA De Leon in 1986 and to the City of Fontana in 2004.

No problems were identified for the subject property as to former users or operators of the subject property.

6.2.6 Fontana Building Department

No records of residential properties in the 1940's are available.

6.3 Personal Interviews, Site Records Review

6.3.1 Personal Interviews

The subject property is vacant and no interviews were deemed necessary based upon the research.

6.3.2 Site Records Review

The subject property is vacant. There were no records to review.

6.4 Historical Aerial Photograph Review & Sanborn Fire Insurance Map

Available Sanborn Fire Insurance Maps and Aerial photographs and topographic map from 1938, 1959, 1966, 1995, 2003, 200, 2007, 2012, 2014 and 2016 along with a 1966 USGS Aerial Topo were reviewed. Photographs, Sanborn Fire Insurance Maps and topographic maps in an aerial review are specifically examined for evidence of hazardous materials, as well as on and off-site features that may affect the environmental quality of the property. These features include sumps, pits, ponds, lagoons, aboveground tanks, landfills, outside storage of hazardous materials and general land use. None of those items appeared to be on or immediately adjacent to the subject property in a manner which would be of long term concern for the subject property.

Sanborn Fire Insurance Maps - There were no Sanborn Fire Insurance Maps for this report.

Photo Dated 1938 - The parcel is vacant land with agricultural land to the west, east north and south. There is a large structure on the west side of N Sierra Avenue further northwest.

Photo Dated 1959 - There is now a house on the property and a house further north. There are no other significant changes around the subject property.

Photo Dated 1966 - There are no significant changes to the subject property or surrounding properties.

Photo Dated 1995 - There are no significant changes to the subject property or surrounding properties. Residential properties are being constructed further east.

Photo Dated 2003 - There are no significant changes to the subject or surrounding properties. Residential properties are being constructed further east.

Photo Dated 2006 - The building appears to be gone from the subject property leaving only a foundation. There are no other significant changes in the area.

Photo Dated 2007 - There are no changes to the subject property. There are no other significant changes in the area.

Photo Dated 2012 - There are no changes to the subject property. There are no other significant changes in the area.

Photo Dated 2014 - There are no significant other changes to the subject property or surrounding properties.

Photo Dated 2016 - There are no significant changes to the subject property or surrounding properties.

Copies of sections of selected historical aerial photographs along with a topographic map are in the Appendix.

6.5 Synopsis of Previous Environmental Investigations

There were no prior Environmental Investigations identified or provided by the client.

CAL- EPA online information regarding possible problem properties in the area of the subject property was reviewed. No problems were identified for the subject property. (See appendix)

6.6 Summary of Government Records Search (Refer to Government Lists)

NOTE: This government records summary is based, in part, on investigating critical, or "border zone", properties near the subject property. The *State of California, Department of Health Services,* has defined these sites as being within 2,000 feet (or approximately 0.4 mile) of the subject property. Other sites more distant in proximity may be listed but not considered critical and, therefore, not further investigated.

The following is a summarized form of the detail provided in the Environmental Records Search (ERS) Report in the Appendix.

CATEGORY ONE: NPL, SPL, RCRA-TSD, RCRA-CORRACTS, SWLF, SCL, CERCLIS/NFRAP, TRIBAL LAND SITES

This category is composed of lists compiled by the *US Environmental Protection Agency* and the State of California Equivalency lists. This category includes National Priority List sites, RCRA Corrective Actions by the *EPA* and *USEPA* permitted treatment, permitted solid waste landfills, incinerator sites or transfer stations, storage and disposal facilities within a one mile radius of the subject

property. This includes sites for designation under the Federal SUPERFUND Program an the State Bond Program for sites representing an environmental concern for the discharge of hazardous wastes.

There is one Category One site listed as being within one mile of the subject property as of the date of this report. That site is nearly a mile northeast and not considered a problem for the subject property.

CATEGORY TWO:(½ mile) **LUST, DEED RSTR, TOXIC PITS, CORTESE**
The sites within this category include sites selected for possible placement on the Federal NPL list or the State risks to human health and the environment. This category also includes leaking underground tank sites from both the *Regional Water Quality Control Board* and the State mandated CORTESE lists of properties with hazardous wastes, sites with DEED restrictions and Toxic Pits Cleanup facilities. Sites within this category are provided on this list within a one-half mile as of the date of this report, with other DEED restrictions and Toxic Pits sites from 1994 and 1995.

There are no Category Two site listed involved with leaking underground tanks.

CATEGORY THREE: (1/4 mile) **RCRA VIOL, TRIS, UST/AST**
Sites in this list are the result of RCRA enforcement actions, the Toxic release inventory base, registered aboveground or underground tanks and the result of searches of any unique county data bases. The data bases range from 1994 information for underground tanks to the date of this report for information for RCRA actions and registered aboveground storage tanks.

There are no Category Three sites listed within a one-quarter mile radius of the subject property.

CATEGORY FOUR: (1/8 mile) **ERNS, GNRTR, SPILLS**
Sites in this category include ERNS, which is a national database retrieval system of Incident-Notification information as initially reported by any party regarding incidents of reported releases of oil and hazardous substances. The information in this report combines data from the *United States Coast Guard National Response Center* data base with data from the 10 *EPA* regions.

ERNS/SPILLS - ERNS/SPILLS supports the release notification requirements of Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended; Section 311 of the Clean Water Act; and Sections 300.51 and 300.65 of the National Oil and Hazardous Substances Contingency Plan. There are no ERNS/SPILLS sites listed within one-eighth mile of the subject property as of the date of this report.

RCRA - Sites which generate regulated hazardous waste above a certain quantity are required to use *EPA* identification numbers and are called RCRA sites. An *EPA* identification number does not indicate a problem with a site, but merely that

they use or dispose of a minimum quantity of a hazardous waste. There are no RCRA sites listed within a one-eighth mile radius of the subject property as of the date of this report. The subject property is not an RCRA site.

7.0 DISCUSSION OF INVESTIGATION

Asbestos 1527-13 Section 13.1.5.1 **De Minimis Condition**
Building Materials Presumed to Contain Friable Asbestos
None.

Building Materials Presumed to Contain Non-Friable Asbestos
None.

Pcb 1527-13 Section 9.4.1.10 Poly-Chlorinated Biphenyl (Pcb) - **De Minimis Condition**
There should not be any pcb in any of the utility transformers on or near the site, according to *Southern California Edison* the electrical supplier to the area.

There are no suspected PCB-containing florescent light ballasts.

Aboveground Storage Tanks 1527-13 - The physical site survey did not evidence the existence of aboveground storage tanks currently or formerly on the subject.

Underground Storage Tanks 1527-13 Section 9.4.1.3 9.4.1.4 & .5 - The physical site survey did not evidence current or former underground tanks.

Air Emissions - There are no regulated air emissions from the subject property.

Water Supplies 1527-13 Section 9.4.1.9 - Former discussions with the Fontana Water Company and a review of their web site evidenced a water supply to the area which meets all of California's drinking water requirements.

Wastewater 1527-13 Section 9.4.1.10 & 9.4.4.7 - The subject property is expected to have had a septic tank and seepage system with only domestic waste disposed of. No problems are expected.

Waste Generation, Storage and Disposal 1527-13 Section 9.4.1.4.4 & .5 & .6 & .7 - The physical site survey did not evidence the current or former generation, storage or disposal of regulated hazardous waste on the subject property.

Pesticides, Herbicides, Stressed Vegetation 1527 9.4.4.3 - There was no current use of herbicides or pesticides noted beyond the normal residential and commercial insect and pest control.

Wells - Oil, Water, Injection, Irrigation, Abandoned 1527-13- 9.4.4.6 - There were no wells of any type seen on site nor were any identified adjoining the subject property

Radon - Radon comes from the natural breakdown (radioactive decay) of uranium. The *Environmental Protection Agency* (*EPA*) estimates that the average soil in the United States contains only about one part per million of uranium. Uranium is found in about 150 minerals including granite, phosphate and shale. Granite is a major concern for the presence of radon, as some deposits have been found to contain extremely high levels of uranium. The area of the subject property does not indicate any large deposits of granite material which would be of concern to test for the presence of radon. Phosphorous is an essential ingredient in chemical fertilizers and comes from phosphate rock. There does not appear to ever have been much fertilizer used around the subject property. According to Mr. David Quinton of the *State Department of Radon*, the chance of radon being a hazard in the State of California is very low. Actual testing for radon content was not conducted and is not included in the scope of this report.

Lead-Based Paint - Specific testing is required to determine if paint or other materials used in the construction of the building on the site contains significant levels of lead. These tests are not within the scope of work for this report and no investigation for lead content was, or will be, performed unless agreed to by the property owner as an additional service, incurring additional costs. There are no structures and no lead paint issues.

Vapor ASTM 2600 Section 10 - There were no sources of vapor from soil or groundwater identified. (See 12.10) Tier I Vapor Encroachment Screening (VES)

Regulatory Actions - There were no regulatory actions noted in the records reviewed regarding the subject property.

Known Site Problems - There are no known site problems.

Regional or Adjacent Problems - There are no regional problems known beyond the dry cleaner being remediated to the northwest which is not a concern due to distance and status.

8.0 CONCLUSIONS

8.1 Areas of No Apparent Concern

There are no areas of concern regarding the current or former operations on-site. The subject property was on the western edge of the Rialto Military Reservation and there was no temporary storage of munitions or ordnance on site noted in the research.

8.2 Areas of Further Concern

The record research and physical site survey did not identify any areas of further concern regarding Recognized Environmental Concerns for the subject property.

9.0 RECOMMENDATIONS

9.1 Areas of No Action

There are no recommended areas of action at this time.

9.2 Further Investigation

In this Environmental Professional's Opinion, the likelihood of contamination is so remote that no further investigation is recommended.

9.3 Performance Statement 1527 13 12.8.1- We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527 - 2013 of APN 023915122 - 330 Feet North of NE Corner N Sierra Avenue and W Casa Grande Drive Fontana, CA 92336. Any exceptions to, or deletions from, this practice are described in Section 1 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

10.0 LIMITATIONS

This report is intended to satisfy the requirements of a Preliminary Phase I Environmental Site Audit as outlined in the ASTM-1527 2013 Guidelines and the 2006 EPA All Appropriate Inquiries" Standard. These standards are intended to define the scope of due diligence necessary in a real estate transaction to provide for the "innocent buyer's defense" under the SARA amendments to CERCLA.

The findings set forth in this Phase I Environmental Site Assessment are strictly limited in time and scope to the date of evaluation(s). Government records searched are limited to the accuracy of the agency prepared lists. The conclusions presented in the report are based solely on the services described therein and not on scientific tasks or procedures beyond the scope of the agreed upon Phase I Environmental Site Assessment. It is hereby acknowledged that, within the scope of this survey, no level of assessment can ensure the real property is completely free of chemicals or toxic substances.

This public records search was conducted with available Federal, State, County and City agency departments, according to recognized procedures and current availability of records. Conclusions resulting from these searches are solely a result of the same. ***S & S Commercial Environmental Services, Inc.,*** assumes no responsibility for events that are not part of these public records. This report is intended for those in privity of contract and any current lender. This report is not transferrable without written authorization. This report is not intended to be used by any other person or entity now or in the future.

S&S Commercial Environmental Services, Inc.



Stephen A Quartararo, CEO
Environmental Professional
Title 40, Code of Federal
Regulations CFR Part 312.22

11.0 REFERENCES

11.1 Published References

11.1.1 Environmental Data Resources ERS Report - November 2017

11.1.2 Aerial Photograph Review -, USGS http://earth.google.com/ http://www.terraserverusa.com/ Historical Aerials.com/

11.1.3 Topographic Maps - *USGS*

11.1.4 *DOG* Maps Map Book Division of Oil & Gas ftp://ftp.consrv.ca.gov/pub/oil/maps/dist2/w2-1/Mapw2-1.pdf

11.1.5 Alquist-Priolo Earthquake Fault Rupture Hazard Special Study Zones

11.1.6 California Code of Regulations Title 22 Chapter 30, Regulations for Hazardous Waste Transport and Disposal, *California Highway Patrol*

11.1.7 FEDERAL, 29 CFR, Part 1910.120; 40 CFR Part 761, DOT; 49 CFR Parts 172.516; Toxic Substance Control Act

11.1.8 http://www.lapl.org/ Los Angeles Public Library Sanborn Fire Insurance Map Collection

11.1.9 CAL EPA Envirostor With Links To Regional Water Quality Control Board http://www.envirostor.dtsc.ca.gov/public/

11.1.10 http://www.aswater.com/Organization/Company_Links/SCWC/scwc.html

11.1.11 http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?

11.1.12 http://www.epa.gov/swerosps/bf/aai/aai_final_factsheet.htm
All Appropriate Inquiries Final Rule

WHAT IS "ALL APPROPRIATE INQUIRIES?"
"All appropriate inquiries" is the process of evaluating a property's environmental conditions and assessing potential liability for any contamination.

WHY IS EPA ESTABLISHING STANDARDS FOR CONDUCTING ALL APPROPRIATE INQUIRIES?
The 2002 Brownfields Amendments to CERCLA require EPA to promulgate regulations establishing standards and practices for conducting all appropriate inquiries.

11.1.12 Internet Research http://www.google.com

11.2 Record of Personal Communications

11.2.1	California Division of Mines and Geology Ms. Venice Huffman	November 2017 (213)620-3560
11.2.2	California Division of Oil and Gas Cerritos Office	November 2017 (714)816-6847
11.2.3	Southern California Edison Company Ms. Janice Garston, Customer Service Rep.	November 2017 (909)592-3724
11.2.4	State Department of Radon Mr. David Quinton, Env. Health Specialist	February 1996 (916)324-2308

11.2 Record of Personal Communications (cont)

11.2.5 Fontana Water Company — November 2017
http://fontanawater.com/ — (909) 822-2201

11.2.6 South Coast Air Quality Management District — November 2017
Find — (909)396-2900

11.2.7 http://www.militarymuseum.org/RialtoBackUpFac.pdf
Final Report \ Operational History 1941-1945 — November 2017
Rialto Ammunition Back-Up Storage Point
RIALTO, CALIFORNIA
Prepared for
U.S. Army Corps of Engineers
Los Angeles District
Prepared by:
Science Applications International Corporation
18350 Mt. Langley Suite 210
Fountain Valley, California 92708

12.0 APPENDIX

12.1 Site Location Map

12.2 Historical Aerial Photographs & Sanborn Fire Insurance Maps

12.3 Topographic Map

12.4 Environmental Features

12.5 Building Permits

12.6 DTSC Map & Local Sites

12.7 DOGGR Map Section

12.8 SCAQMD Finds Information

12.9 City Directories

12.10 Tier I Vapor Encroachment Screening (VES)

12.11 Letter from Magnetek

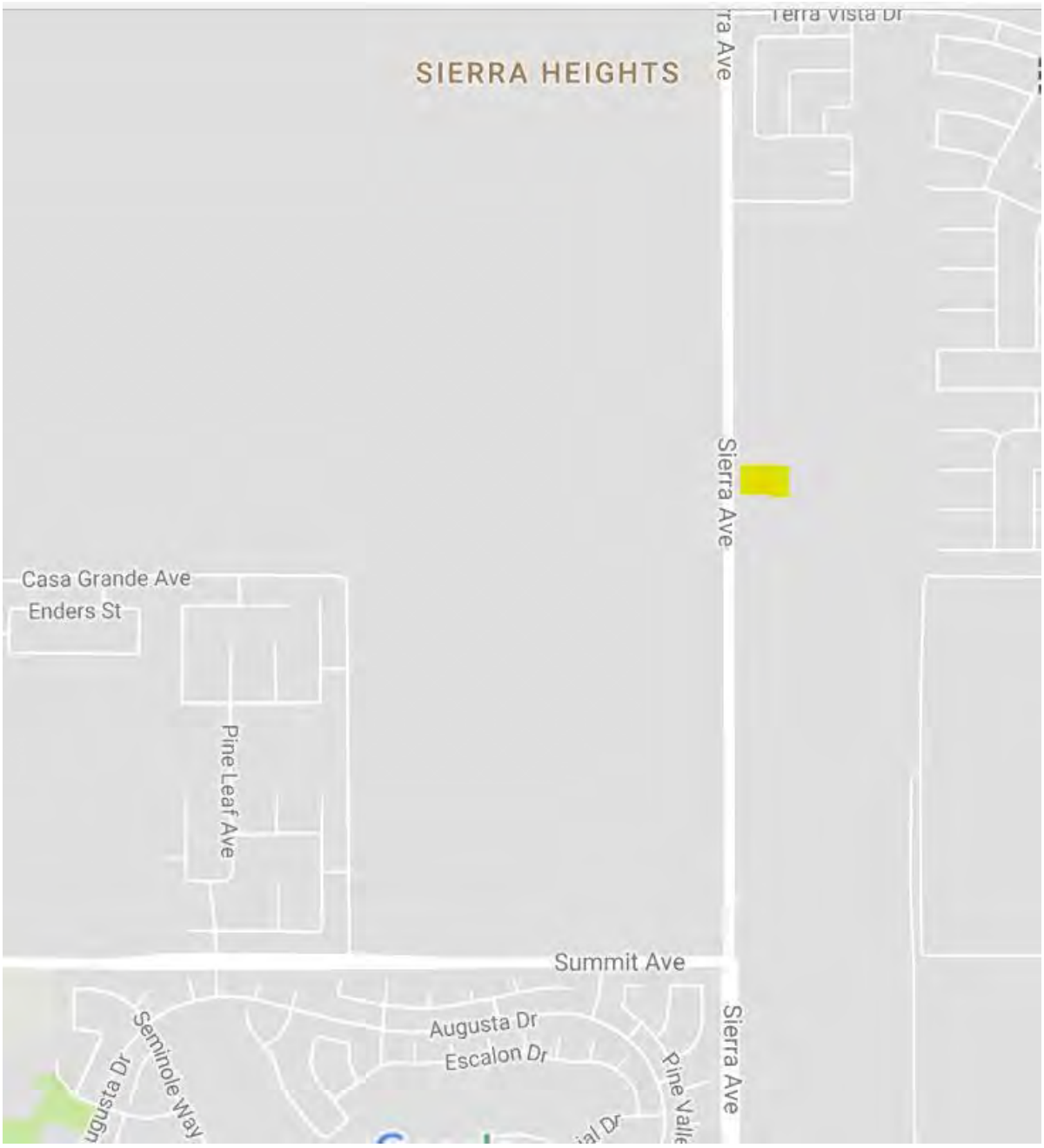
12.12 Certification

12.13 Resume

12.15 Environmental Records Search (ERS) Report

12.1 Site Location Map

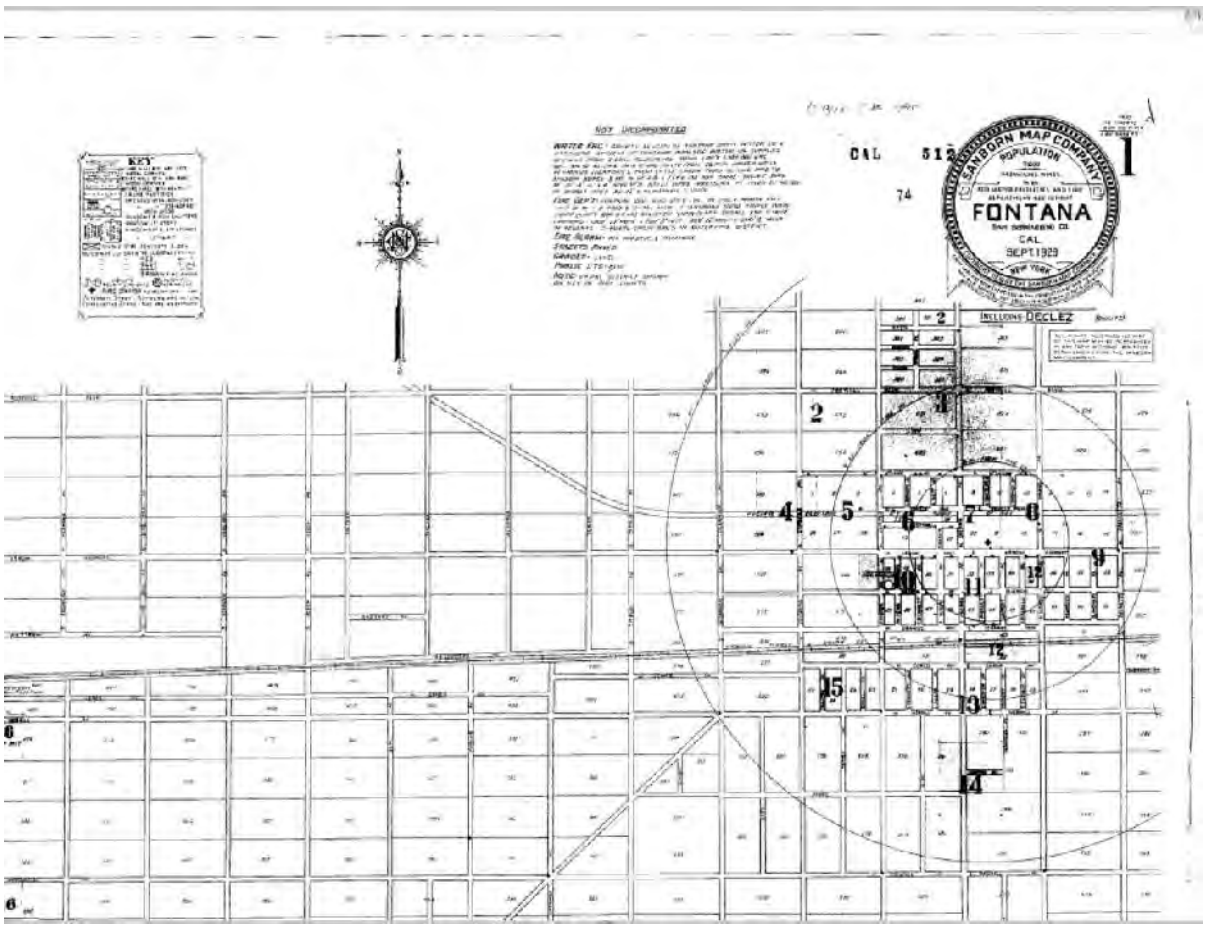
Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336



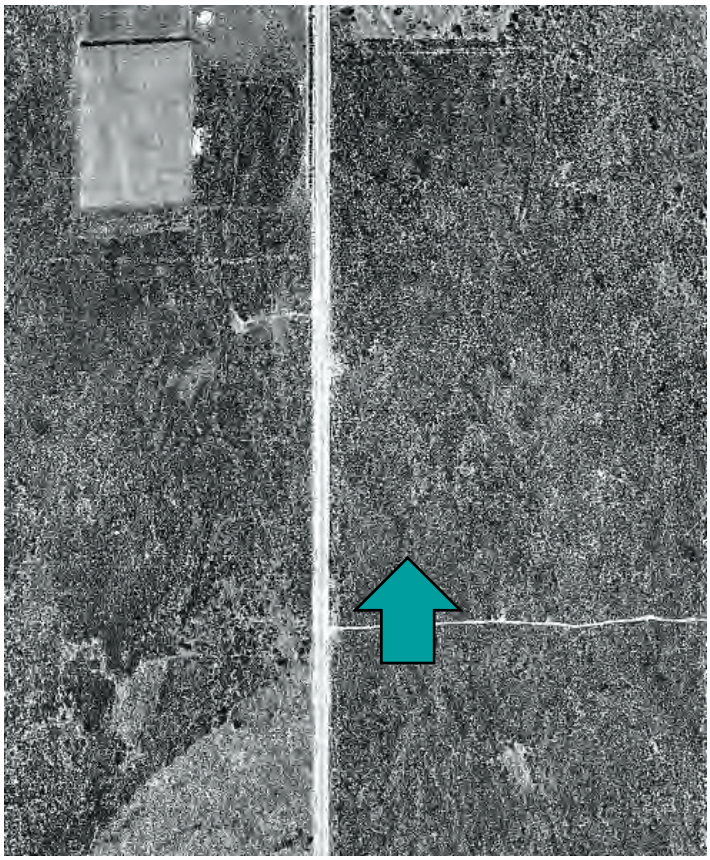
12.2 Historical Aerial Photographs & Sanborn Fire Insurance Maps

There Are No Sanborn Fire Insurance Maps

Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336



Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336



1938

1959





1966

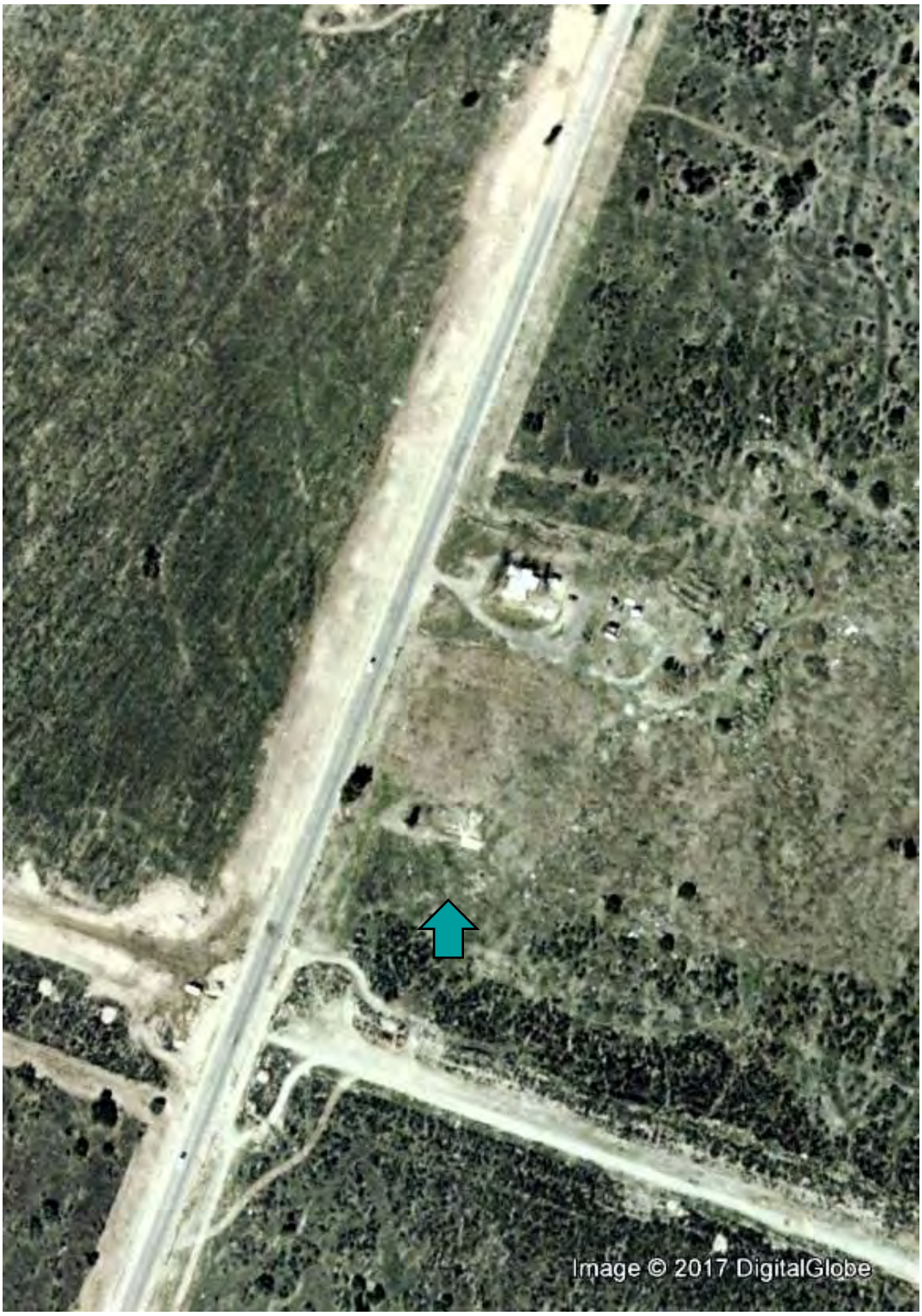


1995



2003

Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336



2006



2012

Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336



2014

Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336

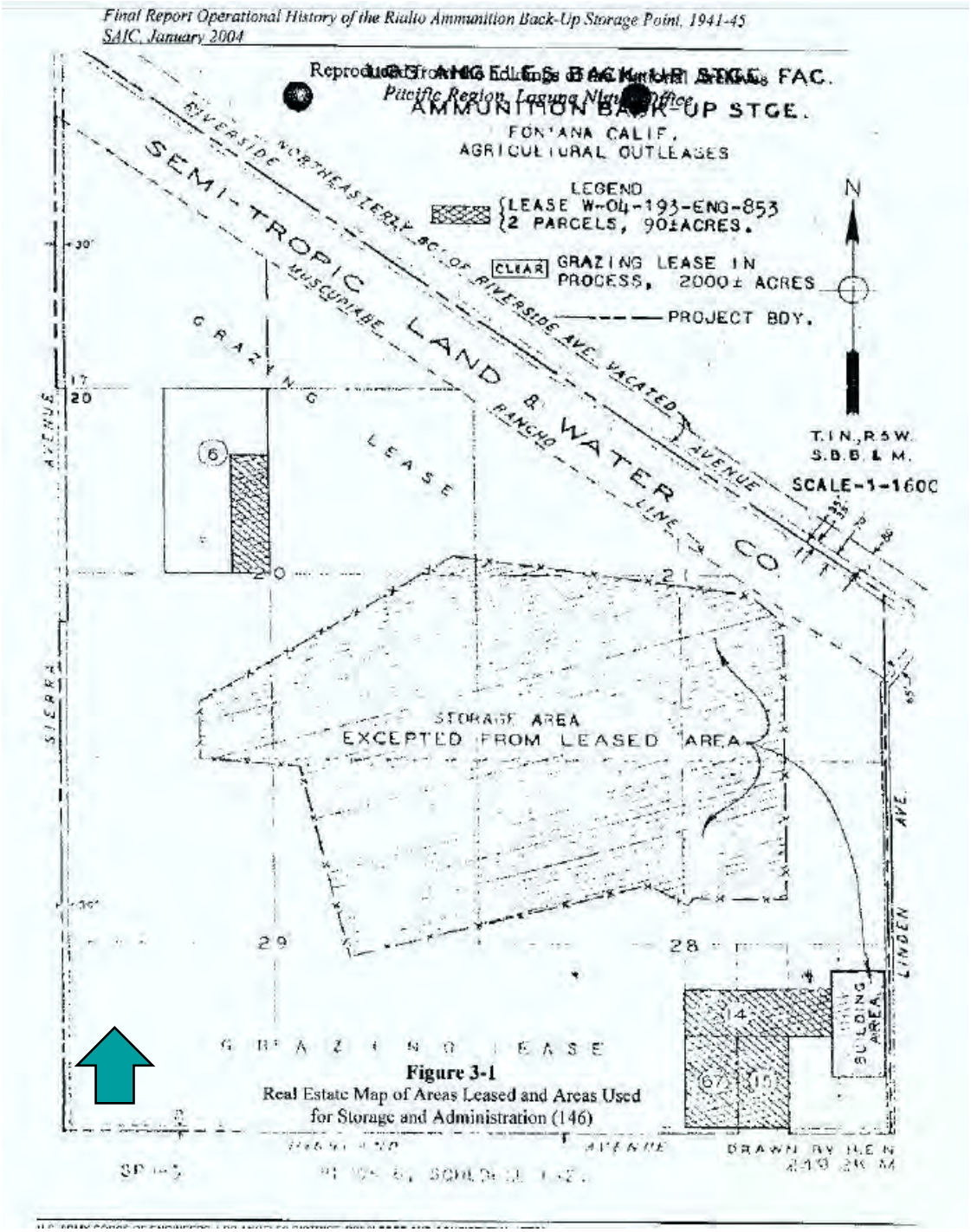


2016



2016 3d

12.3 Topographic Map



1940's Devore 7.5 Minute USGS Topographic Map

12.4 Environmental Features



Concrete House Foundation



Garden Hose IN Dirt East Of Concrete Foundation



Pile OF Rocks And Dirt On South East Side Of Property



East To West Picture Of Two Mature Trees At Former Property Entry



East - Vacant Land Then Single Family Residential



West - Sierra Avenue Then Vacant Land



North - Vacant Land Then Single Family Residential Home



South - Vacant Land

12 Building Permits

SCHEDULE B

At the date hereof, Exceptions to coverage, in addition to the printed Exception and Exclusions contained in said policy form would be as follows:

1. General and Special City and/or County taxes, including any personal property taxes and any assessments collected with taxes, for the fiscal year 2017 - 2018:

1st Installment:	$219.55Open	
Penalty:	$21.97	if not paid by December 11, 2017
2nd Installment:	$219.54	Open
Penalty:	$31.96	if not paid by April 10, 2018
Exemption:	Not Set Out	
Code Area:	010078	
Assessment No.	0239-151-22-0-000	

2. Assessments, if any, for community facility districts affecting said land which may exist by virtue of assessment maps or notices filed by said districts. Said assessments are collected with the County Taxes.

3. The lien of supplemental taxes, if any, assessed pursuant to the provisions of Chapter 3.5 (commencing with Section 75) of the revenue and taxation code of the State of California.

4. Water rights, claims or title to water in or under said land, whether or not shown by the public records.

5. Quitclaim Deed from the United States of America, to Paul Kenda and Theresa Kenda, his wife, dated April 26, 1947 and recorded May 3, 1947 in Book 2050 Page 217 official records recites.

   "Subject to easements and rights of way now existing or reserved; and subject, also, to a reservation of all structures, fences, railways, trackage, electrical and telephone systems, and other improvements constructed or erected by the United States, together with the right to remove such structures, fences, railway trackage, electrical and telephone systems, and other such improvements."

6. An easement for the purpose shown below and rights incidental thereto as set forth in a document:
   Purpose: pole lines
   Recorded: in Book 3024 and Page 253, of Official Records.
   Affects: described as follows:

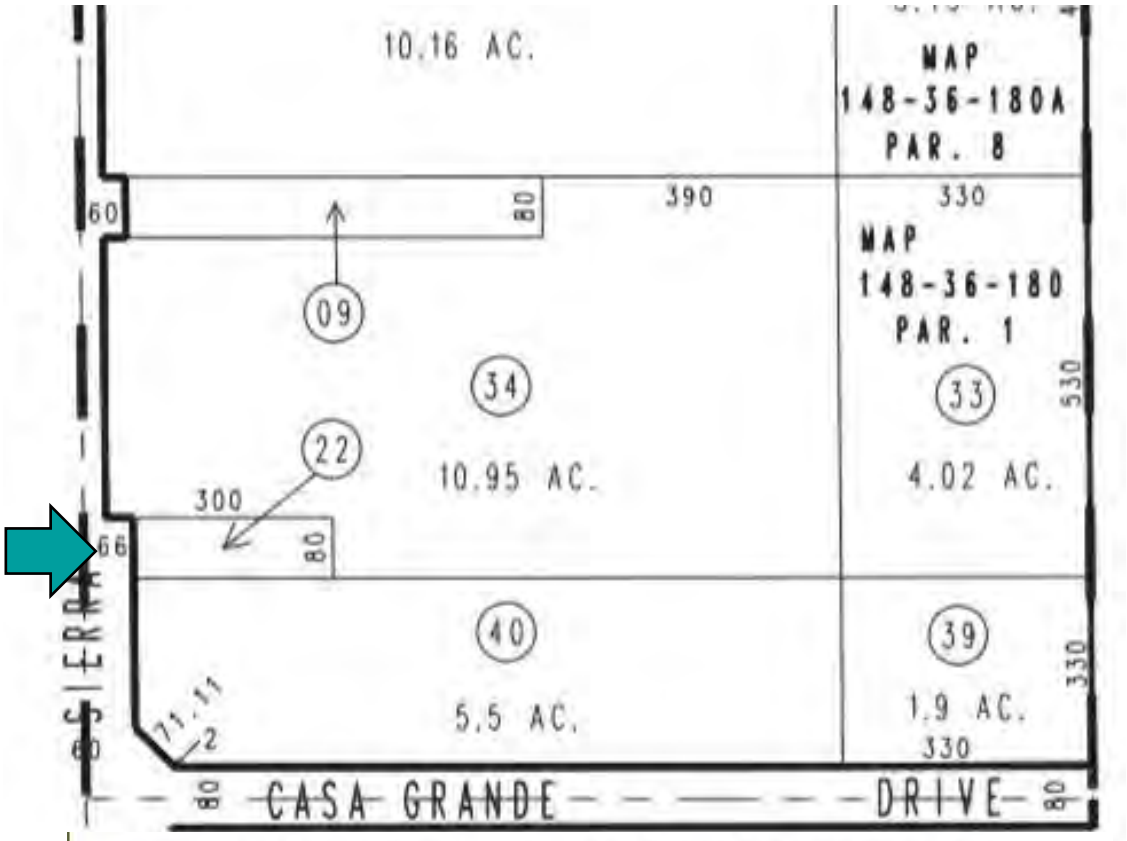
   Beginning at a point on the East line of Sierra Avenue, as the same now exists, distant 370 feet North of the South line of the Southwest 1/4 of the Northwest 1/4 of said Section 20, thence East parallel with the South line of the Northwest 1/4 of said Section 20, 357 feet.

7. Note: Said property is also shown on licensed land surveyor's map, recorded December 10, 1975 in map Book 31, Page 57, of records op survey.

8. The terms and provisions contained in the document entitled Grant Deed
   Recorded: May 6, 2004 as Instrument Number 20040316894, of official records.

9. We find no open Deeds of Trust of record. Please verify by inquiry of escrow personnel and/or agents whether or not we have overlooked something and advise the title department accordingly prior to close of escrow.

Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336



Tax Collector » Property Information For Parcel 0239-151-22-0000

Click here for a printer friendly version of this page.

Type of Property: **UNKNOWN**

Address Information		Legal Description			Roll Value
Situs Address	*Protected per CA Govt. Code Sect. 6254.21*	Tract Number	Lot Number	Block/Unit	As of Jan 1, 2017
Billing Address	*Protected per CA Govt. Code Sect. 6254.21*				$34,049.00
As Of	2/21/1992	N 80 FT S 410 FT W 330 FT SW 1/4 NW 1/4 SEC 20 TP 1N R 5W EX W 30 FT ST EX ADDTL ST			

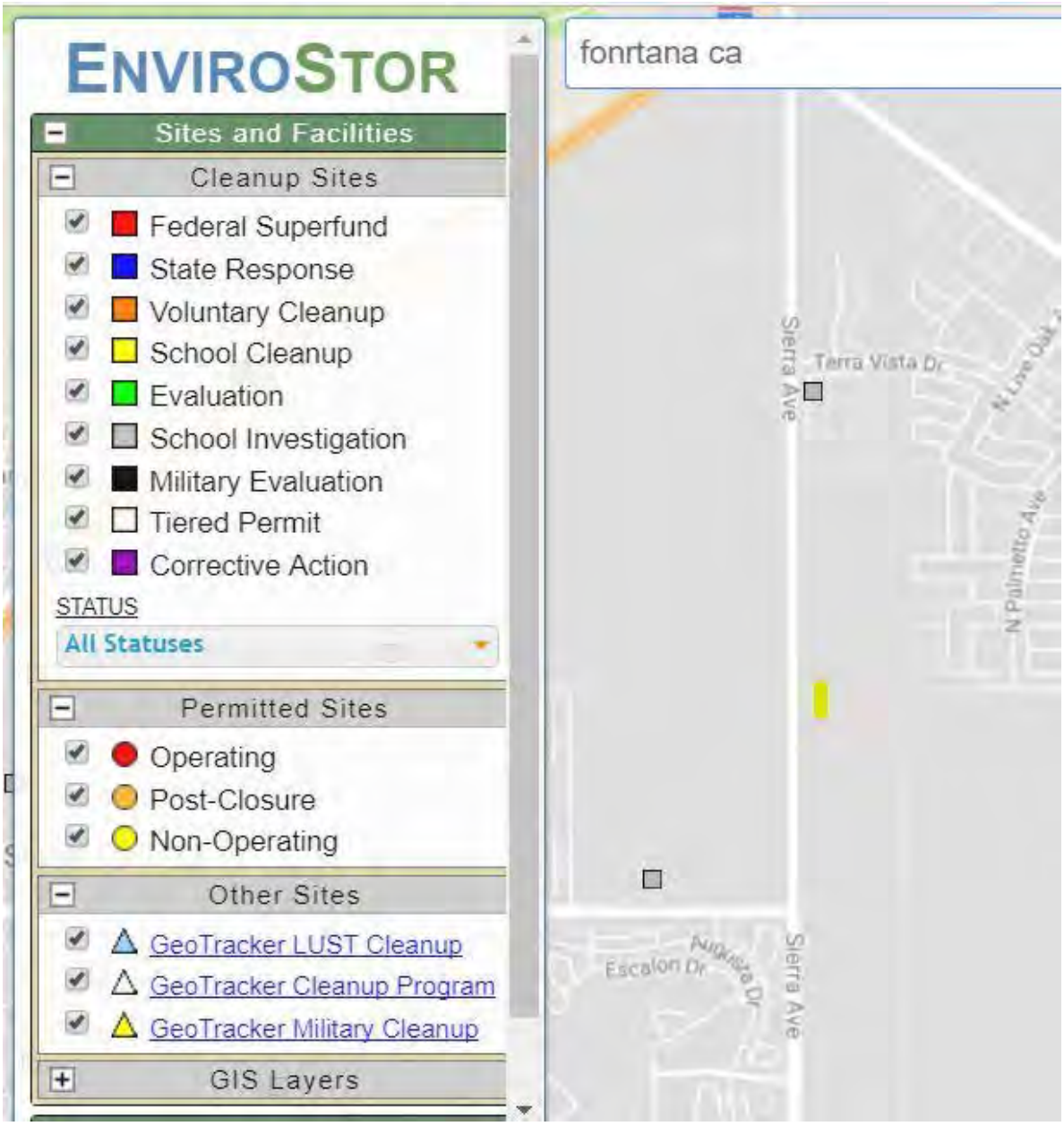
Present Owner Information

Name	Percent Ownership	Relationship	Document Number	Recording Date	Acquire Date	Roll Year
DE LEON , SYLVIA	50%	SPOUSAL	8630043600000	10/14/1986		
DE LEON , ANDREW J	50%	SPOUSAL	8630043600000	10/14/1986		

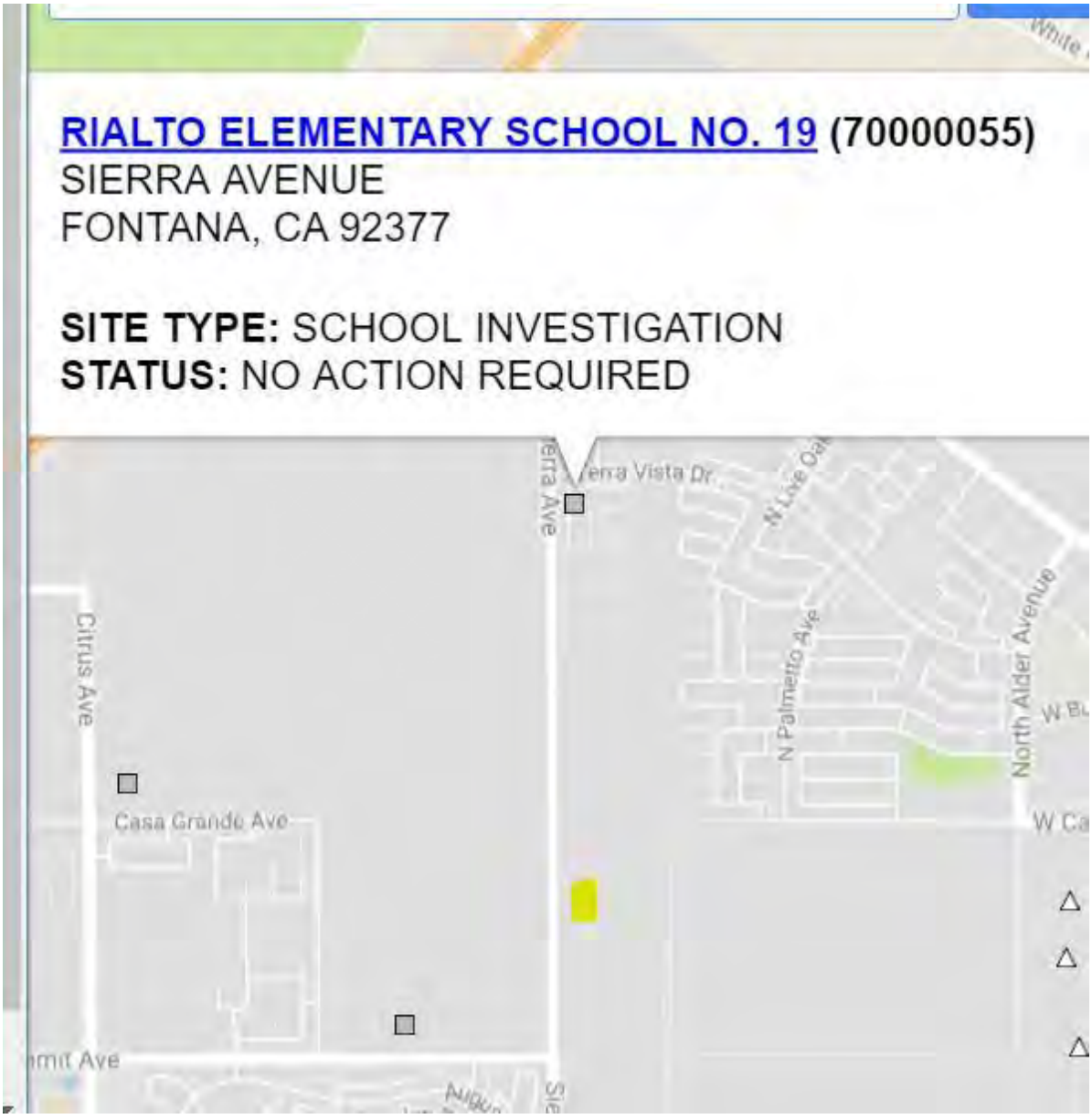
Click here to view parcel history associated with this property.

You can use the menu to the left to see additional information about this parcel.

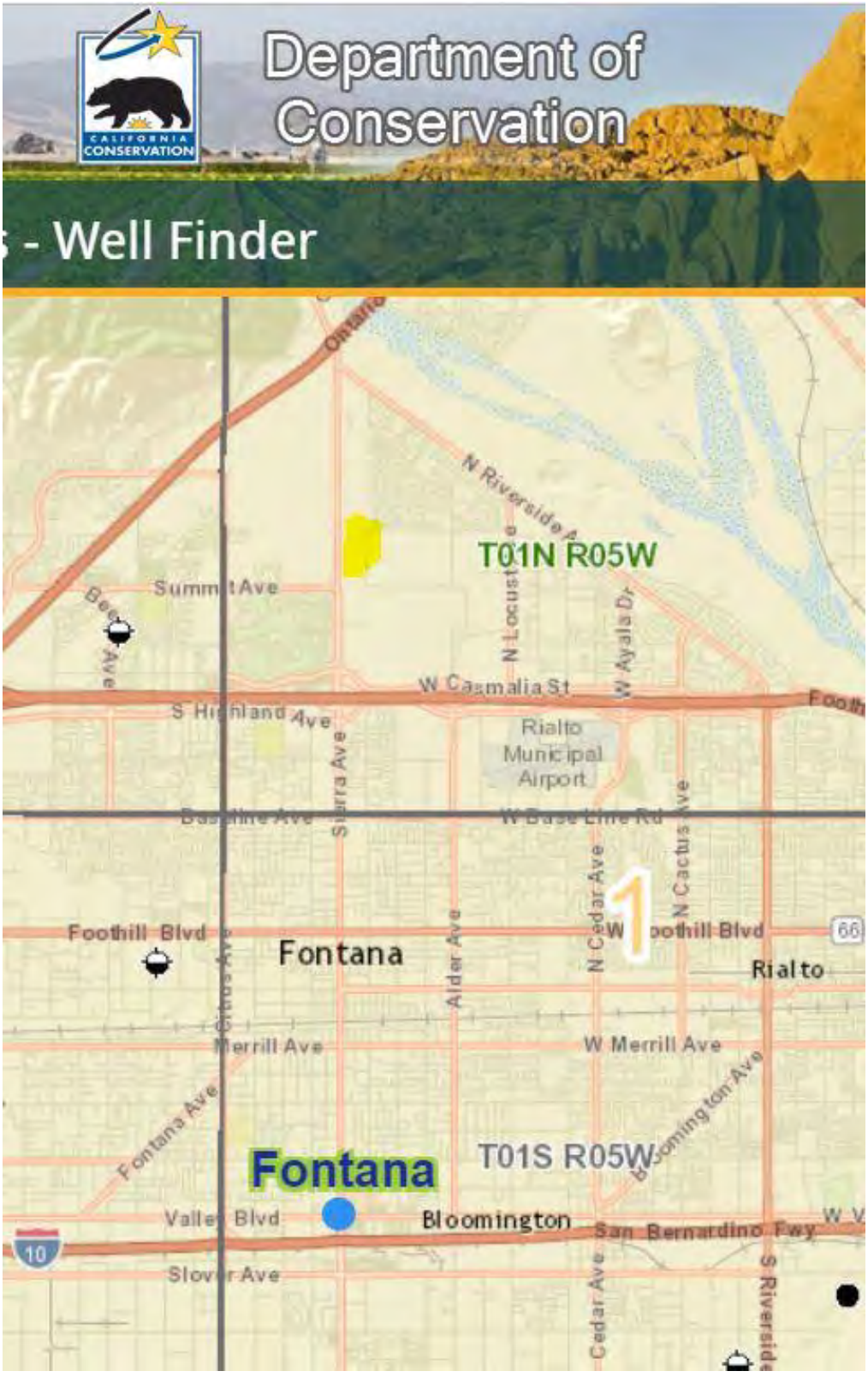
12.6 DTSC Map & Local Sites


ENVIROSTOR
fonrtana ca
Sites and Facilities
Cleanup Sites
Federal Superfund
State Response
Voluntary Cleanup
School Cleanup
Evaluation
School Investigation
Military Evaluation
Tiered Permit
Corrective Action
STATUS
All Statuses
Permitted Sites
Operating
Post-Closure
Non-Operating
Other Sites
GeoTracker LUST Cleanup
GeoTracker Cleanup Program
GeoTracker Military Cleanup
GIS Layers
Sierra Ave
Terra Vista Dr
N Palmetto Ave
Escalon Dr
Sierra Ave

Subject Property:330 Feet N of NE Crn N Sierra Ave & W. Casa Grande Dr Fontana, CA 92336



12.7 DOGGR Map Section



No Oil Wells Close Enough To Be Of Concern

12.8 SCAQMD Find

AQMD

Facility INformation Detail (FIND)

arch Again

cility ID	Facility Name	Facility Address
8877	5565 SIERRA AVE INVESTORS L.C	5565 SIERRA AVE , FONTANA, CA 92335
1151	ALWAYS COOKIN BARBEQUE, HARVEY GAINES	3740 SIERRA AVE , FONTANA, CA 92335
2186	AMERICAN GAS/A NIKAKHTAR	3740 SIERRA AVE , FONTANA, CA 92335
6813	APPLE SCCAL, LLC	16367 SIERRA LAKES PKY , FONTANA, CA 92336
5673	APPLEBEE'S REST WEST LLC	16367 SIERRA LAKES PKY , FONTANA, CA 92336
4995	ARCO AM/PM, AZER REZK	7325 SIERRA , FONTANA, CA 92336
1212	B & A FUEL CENTER, INC.	3740 SIERRA AVE , FONTANA, CA 92335
5487	CARL'S JR 226	16565 SIERRA LAKES PKY , FONTANA, CA 92336
7356	CHEVRON DLR, J & R OIL COMPANY INC	3870-3 SIERRA AVE , FONTANA, CA 92336
8153	COFFMAN SPECIALTIES INC	SIERRA AVE/HIGHLAND AVE , FONTANA, CA 92336
7196	COSTCO WHOLESALE CORPORATION # 627	16505 SIERRA LAKES PKY , FONTANA, CA 92336
9095	COUNTY OF SAN BERNARDINO	7977 N SIERRA AVE , FONTANA, CA 92336
148	DELTA FAMILY RESTAURANT	10144 SIERRA AVE , FONTANA, CA 92336
491	DOVE OIL INC	3740 SIERRA AVE , FONTANA, CA 92335
0228	EARL SCHEIB OF CALIFORNIA INC	9530 SIERRA AVE , FONTANA, CA 92335
3068	EQUILON ENT LLC, SHELL SVC STN	3864 SIERRA AVE , FONTANA, CA 92335
9307	EQUILON ENTERPRISES, LLC.	SIERRA AVE @ I - 15 , FONTANA, CA 92336
1008	FAYEZ HUSSEIN - MUNEER RASHEED	3740 SIERRA AVE , FONTANA, CA 92335
8275	FONTANA VALERO	3740 SIERRA AVE , FONTANA, CA 92335
2842	FONTANA VALERO, FAYEZ HUSSEIN	3740 SIERRA AVE , FONTANA, CA 92335
0851	GOURMET SYSTEMS OF CALIFORNIA, INC	16367 SIERRA LAKES PKY , FONTANA, CA 92336
942	LE MEUR WELDING & MFG CO	6151 SIERRA AVE , FONTANA, CA 92335
8224	LOWES HOME IMPROVEMENT WAREHOUSE	16351 SIERRA LAKES PKY , FONTANA, CA 92336
9718	MIDLAND OIL, ARCO AM/PM DBA	3892 SIERRA AVE , FONTANA, CA 92335
0974	NORWEST GROUP OF COMPANIES, INC.	3740 SIERRA AVE , FONTANA, CA 92335

SOUTH COAST AQMD

Facility INformation Detail (FIND)

Search Again

Facility ID	Facility Name	Facility Address
155613	RALPHS GROCERY # 113	16225 SIERRA LAKES PKY , FONTANA, CA 92336
154032	RALPHS GROCERY CO #113	16625 SIERRA LAKES PKY , FONTANA, CA 92336
99781	SAN BERNARDINO CO SOLID WASTE MGMT DEPT	5087 SIERRA AVE , FONTANA, CA 92336
112328	SAN BERNARDINO CO WASTE SYSTEM DIV	5107 SIERRA AVE , RIALTO , CA 92335
136816	SHELL OIL PRODUCTS US ,SIERRA SHELL #10	3864 SIERRA AVE , FONTANA, CA 92336
180897	SIERRA COMMERCE CENTER 2	5885 SIERRA AVE , FONTANA, CA 92336
114398	SIERRA FONTANA INVESTMENTS/ARCO AM PM	3892 SIERRA AVE , FONTANA, CA 92336
157277	SIERRA LAKE CLEANERS	16953 SIERRA PKY , FONTANA, CA 92335
185236	SIERRA LAKES COMMERCE CENTER	5101 SIERRA AVE , FONTANA, CA 92336
162089	SIERRA METAL & TRUCK BODY FAB., INC.	5183 SIERRA AVE , FONTANA, CA 92336
176987	SIERRA SAN ANTONIO MEDICAL PLAZA	16465 SIERRA LAKES PKY , FONTANA, CA 92336
152015	TESORO SO COAST CO LLC, COST CTR #68534	3864 SIERRA AVE , FONTANA, CA 92336
143205	US PETRO, INC/CHEVRON FONTANA	3870-B SIERRA AVE , FONTANA, CA 92336
126741	WILLIAMS COMMUNICATIONS, LLC	4852 SIERRA AVE , FONTANA, CA 92336

First | Prev | Page 2 of 2 (39 records) | Next | Last | Page 2 | Export To Excel

Not On SCAQMD Facilities List

12.9 City Directories

City Directories Were Not Considered Necessary For This Report

12.10 Tier I Vapor Encroachment Screening (VES)

TIER I VAPOR ENCHROACHMENT SCREENING (VES) Conducted As Part of Phase I ESA

PROJECT NAME:

E2600 – 15

PROPERTY ADDRESS: APN 023915122 330 ft N of N Sierra and W CASA Grande Drive Fontana CA 92336.pdf

QUESTIONNAIRE COMPLETED BY: S&S Commercial Environmental Services, Inc.

NAME: Stephen A. Quartararo
TITLE: C.E.O., Environmental Professional CFR Title 40 Section 412.22
ADDRESS: 6693 Moonriver Street CITY/STATE/ZIP: Eastvale, CA 91752
TELEPHONE: (949)650-4994 EMAIL ADDRESS: s.quart@att.net

UNITS: 0

DATE OF RESPONSE :

1	Property type	[ ] Commercial	[X] Industrial	[ ] Multi-Tenant [ ] Vacant Land
2	Are there any buildings/ structures on the property?	Yes [X]	No [X]	Unknown [ ]
3	Will buildings/structures be constructed on the property in the future?	If yes, type construction _ Yes [ ]	No [X]	Unknown [ ]
4	If buildings exist or are proposed, do/will they have	If yes, type construction _____ Yes [ ]Hydraulic	No [ ]	
5	elevators?Type of level below grade (existing)	[ ] Full Basement	[ ] Crawl Space	[X] Slab on Grade
		[ ] Parking Garage	[ ] Multi-level	
6	Ventilation in level below grade?	Yes [ ]	No [X]	Unknown [ ]
7	Sump pumps, floor drains, or trenches (existing) Radon or	Yes [ ]	No [X]	Unknown [ ]
8	methane mitigation system installed? Not Needed	Yes [ ]	No [X]	Unknown [ ]
9	Heating system type (existing)	(CHECK ALL THAT APPLY)		
		[ ] Hot Air Circulation		[ ] Electric Baseboard
		[ ] Hot Air Radiation		[ ] Heat Pump
		[ ] Hot Water Radiation		[ ] Wood Stove
		[ ] Kerosene Heater		[ ] Steam Radiation
		[ ] Fireplace		[ ] Coal Furnace
		[ ] Radiant Floor Heat		[ ] Hot Water Circulation
		[ ] Fuel Oil Furnace		[ ] Gas Furnace
		[ ] Other		
10	Type of fuel energy (existing or proposed)?	(CHECK ALL THAT APPLY)		
		[ ] Natural Gas [ ]		[ ] Electric
		Propane [ ] Kerosene [ ]		[ ] Fuel Oil
		Coal		[ ] Wood
		[ ] Other		[ ] Solar
11	Have there ever been any environmental problems at the property?	Yes [ ]	No [ ]	Unknown [ ]
12	Does/was/will a gas station or dry cleaner operate anywhere on the property?	If yes, describe _____ Yes [ ]	No [X]	Unknown [ ]
13	Do any tenants use hazardous chemicals in relatively large quantities on the property?	Yes [ ]	No [X]	Unknown [ ]
14	Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building?	If yes, describe _____ Yes [ ]	No [X]	Unknown [ ]
15	Are the operations (or proposed operations to be performed) on the property	Yes [ ]	No [X]	Unknown [ ]
16	Were/Are there any existing or proposed underground storage tanks (USTs) or above ground storage tanks (ASTs)?	Yes [ ]	No [X]	Unknown [ ]
17	Are there any sensitive receptors (for example, children, elderly, people in poor health, and so forth) that occupy or will occupy the property? Senior Citizens Aparments?	Yes [ ]	No [X]	Unknown [ ]
18	Is property a collection of parcels tied together for current use?	Yes [ ]	No [X]	Unknown [ ]
19	Where there any uses identified in Phase I research on the subject or adjoining properties which used chemical formulations considered Chemicals of Concern (COC)	Yes [ ]	No [X]	Unknown [ ]
20	If COC were identified, is COC use continuing on the property?	Yes [ ]	No [X]	Unknown [ ]
21.	If COC were identified on the adjoining properties, continuing?	Yes [ ]	No [X]	Unknown [ ]
22	If COC were identified, was/is their use significant?	Yes [ ]	No [X]	Unknown [ ]
23	If COC use was/is significant is/was there migitigation? Explain - see below	Yes [ ]	No [-]	Unknown [ ]
24.	Is a source of vapor within 100 feet of TP - Encroachment Condition	Yes [ ]	No [-]	Unknown [ ]
25.	Does Tier I Phase I or HUD 4128 Screening Indicate Need for Tier 2	Yes [ ]	No [X]	Unknown [ ]

26. Subject Property was vacant then on the edge of a military reservation then residential and now vacant

Federal Regional & California Human Health Screening Levels (CHHSLs) 2010. HUD 2016, ASTM E2600 - 15 Vapor Intrusion, Vapor Encroachment Condition.

This list is a voluntary checklist to determine if a VEC is identified for the Target Property (TP) (that is, the presence or likely presence of COC vapors in the vadose zone of the TP caused by the release of vapors from contaminated soil and/or groundwater either on or near the TP

ASTM defines the term "Vapor Encroachment Condition" - presence or likely presence of "chemical of concern" vapors in the subsurface of the Target Property caused by the release of vapors from contaminated soil or groundwater or both either on or near the Target Property as identified by the Tier 1or Tier 2 procedures,

Questions 1-18 & 24 Copyright by ASTM Int'l (all rights reserved); Tue Aug 13 18:58:32 EDT 2013 Downloaded/printed by Stephen Quartararo (SS) pursuant to License Agreement With additions to same by Stephen Quartararo 18 - 23 .
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12.11 Letter from Magnetek

The following is a reprint of:

MagneTek
Universal Manufacturing

200 Robin Road
Paramus, NJ 07652
Phone (201) 967-7600
TELEX 753330
Fax (201) 967-0904

Mailing Address
P.O. Box 3028
Paterson, NJ 07509

RE: PCB's

Ballasts are used in fluorescent fixtures in business, commercial and industrial establishments, as well as in schools. One of the devices used in these ballasts is called a capacitor, which makes the ballasts operate more efficiently. These capacitors, used in ballasts made by every manufacturer in the industry, including Universal, used PCBs in small amounts until 1978, when a change was made to another liquid. Universal ballasts manufactured since January 1979 do not contain PCBs and the label of all these ballasts contain the statement "No PCB's".

The capacitor is a hermetically sealed device, which entirely isolates the PCB from human contact. The typical fluorescent ballast contained about 0.05 lbs. of 100% PCB liquid. That represents 1-2 liquid ounces. The weight of PCB used in relationship to the total capacitor weight, was approximately 15%. In relationship to the total ballast weight it varied from 0.6% (Slimline ballasts) to 1.5% (2 lamp, 40 watt ballasts). The degree of chlorination was 42%.

For HID ballasts where larger capacitors were used, it may have been as much as 5-6 ounces of liquid. In all cases the amount of "free PCBs" (the quantity that could leak if the can ruptured), was much less because most of the liquid was absorbed by the blotter-like dielectric material.

Ballasts occasionally fail in service and sometimes the asphalt (tar) with which they are filled melts and leaks out. On very rare occasions, the capacitor will also rupture and its contents mix with the tar. If a leak occurs, it should be cleaned up with any petroleum-based solvent.

Such a leak does not represent any significant immediate or long-term hazard. The United States Environmental Protection Agency has recognized the existence of PCBs in ballasts, has carefully evaluated the situation and in the regulations controlling the use and disposal of PCBs has concluded that continued use in existing lighting installations is acceptable; also that the occasional ballasts which becomes defective in service may be disposed of in compliance with 40 CFR* Part 761 or check with your local State Environmental Protection Agency for instruction.

Should you have any questions regarding this matter, please do not hesitate to call me at your convenience.

Very truly yours,

MagneTek Universal Manufacturing

Robert E. Babcock
Manager, Marketing Engineering

REB:cp

* Code of Federal Regulations

12.12 Certification

ENVIRONMENTAL PROFESSIONAL CERTIFICATION

I, Stephen A. Quartararo declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in Section 312.10 of this part [40CFR Part 312].

I have the specific qualifications based upon education, training, and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



12.13 Resume

RESUME

STEPHEN A. QUARTARARO http://www.phase1reports.com
Environmental Professional, CFR Title 40 Code of Federal Regulations Section 312.22
ASTM 1527-2013, CA 2010 CHHSLs, CA HERO 2015, HUD 2015 and SBA May 1, 2015.

Owner S&S Commercial Environmental Services, Inc. since formation 1997. General Engineering Contractor A, Hazardous Materials Certified, General Building Contractor B, Insulation and Acoustical C-2, Asbestos Certified, Water Well Drilling Contractor C-57. Real Estate Brokers License, Life & Health Insurance License.

Phase I Site Surveys, Phase II Soil and Groundwater Investigations, Phase III Remediation of Soil and Groundwater leading to No Further Action or Closure by Local, County, State and Federal Agencies. Environmental Hazard Assessment, Project Cost to Cure Physical Deterioration, Construction Management, Environmental Site Appraisals. Storm and Irrigation Water Conservation, Re-use.

RECENT PROJECTS
December 2016 - Facilitator with LA County Fire Department Site Mitigation Unit and General Engineering Contractor for Closure of 3.5 acre industrial property in Carson, CA over a five year period. Removal of PCE Vapor in three major areas to 45 feet. Removal and off haul of 30 = twenty-four ton truckloads of gasoline and diesel, pce and tce contaminated waste under over site of LA County Fire Department Site Mitigation Unit in a final remediation of source. Closure of minimally contaminated groundwater at 58 feet as non-beneficial water attenuating naturally.

March 2016 - No Further Action (NFA) Closure Letter for Soil, Soil Vapor and Groundwater for large light industrial property in Carson, CA - Proved liability for further quarterly monitoring and remediation of groundwater under NFA property was responsibility of Owner of an off site VOC contaminant source being remediated by Others. Coordinator for Oil Well Re-abandonment at Signal Hill Site 2009, Valencia 2006.

EXPERIENCE
6,000 plus Phase I site assessments in CA, AL, AZ, AR, NV, NY and TN.
100's of Phase II and Phase III site investigations and closures in CA.

39 years as asbestos and environmental consultant and abatement contractor direct and subcontract. 20 of those years as owner of an Environmental Company, 19 as a General Engineering Contractor with Hazardous Certification and 3 of those years with related storm and irrigation water conservation related companies.

Professional cost estimation, third party verification of sampling activities, underground tank removal monitoring and property assessment consultant for soil and groundwater.

Coordinator of design and construction in two Los Angeles high rise office buildings for fire safety retrofit under the City of Los Angeles fire life safety ordinance.

Develop and Design of Affordable Housing, including site selection, negotiation, planning and permit process and funding sourcing.

MAJOR CONTRACTS

UC Santa Barbara (1979) - HVAC system cleaning of five-story Chemistry and Physical Sciences buildings on campus**.**

VA Medical Center LA Jolla (1980) **-** After-fire decontamination of Surgery Floor HVAC.

TRW (1983) - Bulk materials sampling for asbestos in 65-building facility, Redondo Beach, CA.

UC Chancellors Office, UC San Francisco Medical Center (1984) - Survey design, field work completion, report design, report completion for UC Chancellor's office's funding request to State Assembly funding for asbestos abatement and management - 103 buildings - hospital, classrooms, administrative offices.

California Hospital Medical Center (1983) - Contract and specification design and completion of asbestos abatement projects.

County of Los Angeles (1984) - Approval of specifications, third party monitoring of contractor during Building 5 Asbestos Abatement Project at Rancho Los Amigos Medical Center.

JMB Property Management (1985) - Coordination as part of Pacific Abatement Group with building management and Med Tox abatement and hygiene personnel on 3 stories of asbestos containment project in 25 story high rise office building, Century City, CA.

UC Riverside (1985) - *Asbestos management and control in utility tunnels under campus.*

Tishman Construction (1985) - Area containment for electrical work adjacent to occupied areas in asbestos affected Bank of America offices at ARCO Towers, Los Angeles, CA.

Equitable Real Estate Investment Management (1986) - Asbestos abatement and containment projects, including elevator lobby doors, full floor abatement and after-fire decontamination projects in former First Interstate Bank and Union Bank buildings, Los Angeles, CA.

Baxter Pharmaceutical (1988) - Building materials sampling for asbestos and reports for 14 buildings in seven Midwest States.

Fremont Indemnity (1991) - Independent owner's agent for fire protection citation response to LAFD and construction of tenant improvements for asbestos abatement and fire life safety rehabilitation of 11-story office building in midtown Los Angeles. Included removal of underground diesel tank.

Redlands Federal Savings (1990) - Phase I Environmental Assessments of raw land in Inland Empire and San Diego areas of Southern California.

SPS Technologies (1993) - **"Qualified Risk Assessment"(QRA)** for sale of existing 20-acre site in Costa Mesa, CA: Work involved review of commercial appraisals, Environmental Site Remediation work completed, further remediation cost proposals, interviews with responsible government agencies, interviews with banking authorities, preparation of report detailing current conditions and value of property less expected remediation costs, results of interviews with regulatory agencies and financial authorities, four scenarios under which the property might be sold and the anticipated financial return and liability concerns of each scenario.

Money Store Investment Corporation (from 1992 until sold) - Related - 400+ Phase I Environmental Assessments of commercial property as collateral for SBA backed commercial loans in California.

First Union/Wachovia - Successors to Money Story Investment Corporation, Then Wells Fargo

Coast Federal Savings (Former- early 1990's) - 300+ Phase I Environmental Assessments and Asbestos Inspections of residential apartment buildings, commercial shopping centers and other commercial buildings from San Diego to San Francisco and Sacramento to New York State.

Chevron Real Estate Services (1991) - Coordination and management of gasoline contaminated soil remediation project in Blythe, CA; work included shoring to 30 feet along the western perimeter of project to protect adjacent restaurant, removal and bio-remediation of 3,500 cubic feet of contaminated soil, removal of 5,000 gallons of contaminated water, placement of filter

over local groundwater, back filling of excavation with remediated soil.

Carlsberg Management Company (1989-1995) - Independent owner's agent for fire protection citation response to LAFD and construction of tenant improvements for asbestos abatement and fire life safety rehabilitation of 10-story office building in West Los Angeles.
Owner's representative: work included selection and coordination of architect, mechanical, electrical, fire sprinkler, asbestos abatement/containment and industrial hygiene contractors and interface with the City of Los Angeles Building, Electrical and Structural Departments and Inspectors over a five year period under occupied and vacant building conditions.
California Federal Bank (1993) - Phase I Environmental Assessments and Asbestos Inspections of commercial and residential buildings in Northern and Southern California.
Folger & Levin, Law Firm (1995) - "Environmental Risk Assessment" (ERA) for 3-acre parcel in West Los Angeles. Review of six environmental soil and groundwater studies, practical expansion of research and coordinated explanation of real environmental issues for use by commercial property appraiser.
State Farm Insurance Company (1995) - Asbestos expert for client negotiations.
Berger, Kahn, Shafton, Moss, Figler, Simon & Gladstone (1996/1997) - Asbestos expert witness.
Prestholt, Kleeger, Fidone & Villasenor (1996) - Asbestos expert witness.
S&S Commercial Environmental Services (1997 - Present) - Phase I Site Assessments and Miscellaneous Independent Project Management and General Engineering Contractor for soil and groundwater sampling and remediation leading to site closure letter from County and City Fire Departments, Health Departments and CA Regional Water Boards ranging from thousands to hundreds of thousands of dollars. Oil Well Re-abandonment.
Bank of America - Related - Phase I Environmental Assessments Southern California.
Wells Fargo Bank - Phase I Environmental Assessments and Asbestos Inspections in California for Standard and SBA backed RE property loans. *(Successor To Wachovia Bank - SBA Division)*
Chase Bank - Phase I Site Assessments
First Foundation Bank - Phase I Environmental Site Assessments & Phase I Reviews, Phase II Site Investigations. California and Nevada
Standard Life Insurance Company - Phase I Site Assessments
Metropolitan Life Insurance Company - Phase I Site Assessments
Textron Financial - Heritage Golf Group - 127 Acre Golf Course Santa Clarita - Phase I
Blue Green Preservation - Phase I and Phase II Site Assessments HUD Senior Housing California, Alabama, Tennessee, Arkansas
Miscellaneous Independent Cost Estimation for required remediation of contaminated sites with commercial and industrial property appraisers.

EDUCATION
B.S. Urban Environmental Management; Cal State University Dominguez Hills
J.D. Candidate Classes in Torts, Contracts, Criminal Law, Legal Writing; Western State University, Southern California College of Law
Major Emphasis - Tort Theory and the implications to modern environmental contamination and clean-up problems.
"Low Risk Closure Guidelines" - California Regional Water Quality Board - Los Angeles Region Seminar June 1996.
Miscellaneous Classes provided by State Agencies in past twenty years and job site discussion regarding water quality standards and remediation with Regulators for Closure.

California Storm Water Association (CASQA - Member and participation as vendor representing OSORB as Absorb Concentrate & Eliminate (AC&E San Diego August 2012. Member and participation as vendor representing ASRE (Advanced Stormwater Recovery & Engineering Garden Grove September 2014.

LICENSES
California ***A General Engineering Contractor , Hazardous Materials Certified***
California **B General Building Contractor**
California ***C-2 Contractors License, Asbestos Certified***
California **C-57 Water Well Driller**
California ***Real Estate Broker***
CA **Life & Health Agent (former)**

Current & Former
CERTIFICATIONS
Certified Asbestos Consultant (CAC, State of California
EPA/AHERA *Competent Person, Supervisor/ Management Planner/Project Designer*
Hazwhopper *48 Hour OSHA Certified Field Supervisor*
Certified Professional Estimator (CPE) *Lead Abatement Supervisor*

REGISTRATIONS
Registered Environmental Assessor (REA)
Registered Property Manager (RPM)

AFFILIATIONS
American Society of Professional Estimators (ASPE)
California Society of Real Estate Appraisers (CSOREA)
American Institute of Plant Engineers ***(AIPE)***
California Society of Hospital Engineers ***(CSHE)***
National Society of Power Engineers ***(NSPE)***
Kiwanis International, Greater Anaheim, CA ***(KIWANIS)***

PUBLICATIONS
Industrial Real Estate Association Fall 1997 Newsletter, "The Environmental Report, To Close or Not To Close", 1997
Home Trader Publications, Copyright 1994 - Residential properties for sale or trade. ***American Numerous articles on asbestos in "Asbestos Issues", a nationally published magazine, and the "Los Angeles BOMA" magazine.***

SEMINAR SPEAKER
IRS (Internal Revenue Service), "Discounted Value of Asbestos and Environmentally Affected Property"
CATL (CA Assoc of Thrift and Loans), "The Affect of Asbestos and Environmental Discounts on Loans"
American Society of Professional Estimators - "The Design and Estimate of an Asbestos Abatement Project"
Los Angeles Board of Realtors, "Asbestos in Homes and Property"
(AIPE) American Institute of Plant Engineers, "Asbestos, History and Challenges"
(CSHE) California Society of Hospital Engineers, "Asbestos, History and Challenges"

(SCACEO)Southern California Association of Code Enforcement Officials "Single Room Occupancy Hotels, History and Modern Operations"

TRAINING CLASSES PRESENTED

8-hour Asbestos Awareness Class presented to:

* City of LA Fire Safety Inspectors
* Zurn Cosco Supervisors and Workers
* Grinnell Fire Protection Supervisors and Workers

EDUCATION VIDEOS

Installation of Fire Sprinkler Hangers within asbestos affected environments, 1986

SROs, The Myth and Reality, 1991

DEVELOPMENT DESIGN

General Partner - 210-unit Single Room Occupancy (SRO residential project in Anaheim, CA.

General Partner - 55-unit Single Room Occupancy (SRO residential project in Santa Ana, CA.

EMPLOYMENT HISTORY AND OWNERSHIP

S & S Commercial Environmental Services, Inc., ASRE, Inc. AC&E, Inc., Enviroprop, Home Trader Realty, Inc., Equity Funding Mortgage, NATEC International, Inc., McClelland Management Services, National Abatement Corporation, Med-Tox Consultants, Pacific Abatement Group, Asbestos

12.14 Environmental Records Search (ERS) Report

ENVIRONMENTAL RECORD SEARCH

"The Intelligent Choice"

RecCheck

Report Results

The Standard for ASTM/AAI Radius Searches

(One Mile Environmental Records Search, Exceeds ASTM 1527/1528 and EPA All Appropriate Inquiry)

REPORT RESULTS



Site Location:

330 Feet North Of Ne Corner Sierra Ave And Casa Gr
Fontana, CA 92336
(N 34-9-32, W 117-26-7) NAD83

Client:

S&S Commercial Environmental Services, Inc.

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EXECUTIVE SUMMARY

INFORMATION ON THE REQUESTED LOCATION

Site Address:	330 Feet North Of Ne Corner Sierra Ave And Casa Gr Fontana, CA 92336
Client Project Name/Number:	APN 023915122 2104691008
Coordinates:	N 34-9-32, W 117-26-7 (NAD 83) 34.158838, -117.435362
Date of Report	November 18, 2017
ERS Project Number:	2104691008
Subject Site Listed on the following lists:	Not Listed
Subject Site Listed as Map ID#:	N/A
USGS 7.5 Minute Quad Map:	Devore (2015-03-17)
Subject Site Located within a Potential Area of Concern:	No
Township, Section and Range:	Township: 01N Range: 05W Section: 20 Baseline: San Bernardino
Site Elevation: (feet above or below (-) mean sea level)	1754
Flood Zone: (FEMA Q3 Digital Data)	Panel: 06071C7920H, Effective Date: 8/28/2008 Zone X - Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
Fire Insurance Map Coverage:	Coverage May Exist in Fontana. Years: 1926, 1929, 1938. Sources: ERS; Stanford Univ. ; California State Univ., Northridge,Stanford Univ. ;
Radon Information:	EPA Radon Zone: 2 (Predicted avg for county: 2 to 4 pCi/L)For zip code 92336: Number of tests per zip code: 3 Number of tests where radon is > 4 pCi/L: 0 Percentage of test where radon is > 4 pCi/L: 0.00% Other Information: Not Reported
Search Radius Expansion Size: (In Miles)	0

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Soil Type: **(USDA Soil Survey Geographic Database) (SSURGO)**	Soboba gravelly loamy sand, 0 to 9 percent slopes Map Unit Type: Consociation Hydric: No Drainage Class: Excessively drained General Information: Sandy-skeletal, mixed, thermic Typic Xerofluvents
Zip Codes Searched for "Un-Mappable" Sites:	Not Researched
Occurrence Count:	1

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SUMMARY OF OCCURRENCES

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
A1 Maps: 6	245 B.F. GOODRICH	3196 NORTH LOCUST RIALTO	NPL-R9-US	Currently on the Final NPL	0.97 E	N/A

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POTENTIAL AREAS OF CONCERN/CONTAMINATION SUMMARY

DATABASE SEARCHED	SUBJECT SITE WITHIN POTENTIAL AREA OF CONCERN	AREAS FOUND WITHIN 1-MILE RADIUS
NPL-R9-US	No	1
MethaneLF-CA	No	0
LA-LF-CA	No	0
Military-Bases-US	No	0
SGV-Deep-Plumes-CA	No	0
SGV-Shallow-Plumes-Puente-Valley-CA	No	0
SGV-Shallow-Plumes-CA	No	0

DATABASE OCCURRENCE SUMMARY

HIGH RISK* OCCURRENCES IDENTIFIED IN REQUESTED SEARCH RADIUS		
DATABASE SEARCHED	DISTANCE SEARCHED (MILES)	HIGH RISK OCCURRENCES FOUND
CERCLIS-US	0.5	0
CorAct-Open-CA	0.5	0
County-LUST-Open-CA	0.5	0
County-SLIC-Open-CA	0.5	0
Hist-UST-Cleanup-CA	0.5	0
LUST-Open-CA	0.5	0
Military-Active-CA	1	0
NPL-US	1	0
Proposed-NPL-US	1	0
Response-CA	1	0
SAA-Agreements-US	1	0
School-Active-CA	0.5	0
SLIC-Open-CA	0.5	0
State-Response-Active-CA	1	0
Superfund-Active-CA	1	0
Tribal-LUST-Open-Reg9	0.5	0
VCP-Active-CA	0.5	0

* For the purposes of this report, “high risk” occurrences are those that have known contamination and have not received a “case closed” or “no further action” status from the agency that maintains the records.

ASTM/AAI STANDARD RECORD SOURCES SUMMARY				
STANDARD ENVIRONMENTAL RECORD SOURCES	ASTM MIN. SEARCH DIST. / ERS SEARCH DIST. (MILES)	ERS DATABASE NAME	TOTAL LISTINGS	MAP ID #’S
Federal NPL site list	1.0 / 1.0	NPL-US	0	None Listed
		Proposed-NPL-US	0	None Listed
Federal Delisted NPL site list	0.5 / 1.0	Delisted-NPL-US	0	None Listed

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Federal CERCLIS list	0.5 / 0.5	CERCLIS-US	0	None Listed
Federal CERCLIS NFRAP site list	0.5 / 0.5	CERCLIS-Archived-US	0	None Listed
Federal RCRA CORRACTS facilities list	1.0 / 1.0	RCRA-COR-US	0	None Listed
Federal RCRA non-CORRACTS TSD facilities list	0.5 / 0.5	RCRA-TSDF-US	0	None Listed
Federal RCRA generators list	Property and adjoining properties / 0.25	RCRA-CESQG-US	0	None Listed
		RCRA-LQG-US	0	None Listed
		RCRA-NON-US	0	None Listed
		RCRA-SQG-US	0	None Listed
Federal Inst/Eng control registries	Property Only / 0.25	Controls-RCRA-US	0	None Listed
		Controls-US	0	None Listed
		Hist-US-EC	0	None Listed
		Hist-US-IC	0	None Listed
		LIENS-US	0	None Listed
Federal ERNS list	Property Only / 0.0625	ERNS-US	0	None Listed
State and Tribal-Equivalent NPL	1.0 / 1.0	Response-CA	0	None Listed
		State-Response-Active-CA	0	None Listed
		State-Response-NFA-CA	0	None Listed
		State-Response-Other-CA	0	None Listed
State and Tribal-Equivalent CERCLIS	0.5 / 0.5	Superfund-Active-CA	0	None Listed
		Superfund-NFA-CA	0	None Listed
		Superfund-Other-CA	0	None Listed
State and Tribal landfill and/or solid waste disposal sites	0.5 / 0.5	County-SWF-CA	0	None Listed
		Debris-US	0	None Listed
		Hist-Dumps-US	0	None Listed
		Hist-SWF-CA	0	None Listed
		Land-Disposal-CA	0	None Listed
		SWIS-CA	0	None Listed
		SWLF-US	0	None Listed
		Tribal-ODI-US	0	None Listed
State and Tribal Leaking Storage Tank Lists	0.5 / 0.5	County-LUST-CA	0	None Listed
		County-LUST-Closed-CA	0	None Listed
		County-LUST-Open-CA	0	None Listed
		Hist-UST-Cleanup-CA	0	None Listed
		LUST-Closed-CA	0	None Listed
		LUST-Open-CA	0	None Listed
		Tribal-LUST-Closed-Reg9	0	None Listed

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		Tribal-LUST-Open-Reg9	0	None Listed
State and Tribal Registered Storage Tank Lists	Property and adjoining properties / 0.25	AST-CA	0	None Listed
		AST-CRSP-CA	0	None Listed
		City-AST-CA	0	None Listed
		City-UST-CA	0	None Listed
		County-AST-CA	0	None Listed
		County-UST-CA	0	None Listed
		CRSP-CA	0	None Listed
		FEMA-UST-US	0	None Listed
		Hist-UST-CA	0	None Listed
		Tribal-UST-Reg9	0	None Listed
		UST-Abandoned-CA	0	None Listed
		UST-CA	0	None Listed
		UST-Closed-CA	0	None Listed
		USTComp-CA	0	None Listed
		UST-CRSP-CA	0	None Listed
		UST-Priority-CA	0	None Listed
		UST-Proposed-CA	0	None Listed
State and Tribal Inst/Eng Control Registries	Property Only / 0.5	Controls-CA	0	None Listed
		Deed-CA	0	None Listed
		Hist-Controls-CA	0	None Listed
		HWMP-Controls-CA	0	None Listed
		Liens-CA	0	None Listed
State and Tribal Voluntary Cleanup Sites	0.5 / 0.5	Eval-Hist-CA	0	None Listed
		Eval-Hist-NFA-CA	0	None Listed
		Military-Active-CA	0	None Listed
		Military-NFA-CA	0	None Listed
		Military-Other-CA	0	None Listed
		School-Active-CA	0	None Listed
		School-NFA-CA	0	None Listed
		School-Other-CA	0	None Listed
		Tribal-VCP-US	0	None Listed
		VCP-Active-CA	0	None Listed
		VCP-NFA-CA	0	None Listed
		VCP-Other-CA	0	None Listed
State and Tribal Brownfield Sites	0.5 / 0.5	BF-MOA-CA	0	None Listed
		BF-Tribal-US	0	None Listed

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	**DISTANCE SEARCHED**	**SUBJECT SITE**	**0.125 MILES**	**0.25 MILES**	**0.5 MILES**	**1.0 MILES**	**TOTAL**
BF-Tribal-US	0.5	0	0	0	0	-	0
BF-US	0.5	0	0	0	0	-	0
CERCLIS-Archived-US	0.5	0	0	0	0	-	0
CERCLIS-US	0.5	0	0	0	0	-	0

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FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Controls-RCRA-US	0.5	0	0	0	0	-	0
Controls-US	0.5	0	0	0	0	-	0
Debris-US	0.5	0	0	0	0	-	0
Delisted-NPL-US	1	0	0	0	0	0	0
ERNS-US	0.0625	0	0	-	-	-	0
FEMA-UST-US	0.25	0	0	0	-	-	0
FTTS-ENF-US	0.25	0	0	0	-	-	0
Hist-Dumps-US	0.5	0	0	0	0	-	0
Hist-US-EC	0.5	0	0	0	0	-	0
Hist-US-IC	0.5	0	0	0	0	-	0
HMIS-US	0.0625	0	0	-	-	-	0
LIENS-US	0.0625	0	0	-	-	-	0
NPL-US	1	0	0	0	0	0	0
PADS-US	0.0625	0	0	-	-	-	0
PCB-US	0.25	0	0	0	-	-	0
Proposed-NPL-US	1	0	0	0	0	0	0
RCRA-CESQG-US	0.25	0	0	0	-	-	0
RCRA-COR-US	1	0	0	0	0	0	0
RCRA-LQG-US	0.25	0	0	0	-	-	0
RCRA-NON-US	0.25	0	0	0	-	-	0
RCRA-SQG-US	0.25	0	0	0	-	-	0
RCRA-TSDF-US	0.5	0	0	0	0	-	0
SAA-Agreements-US	1	0	0	0	0	0	0
SWLF-US	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-Reg9	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg9	0.5	0	0	0	0	-	0
Tribal-ODI-US	0.5	0	0	0	0	-	0
Tribal-UST-Reg9	0.25	0	0	0	-	-	0
Tribal-VCP-US	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
AST-CA	0.25	0	0	0	-	-	0
AST-CRSP-CA	0.25	0	0	0	-	-	0
BF-MOA-CA	0.5	0	0	0	0	-	0
BZ-HazWaste-CA	0.5	0	0	0	0	-	0
CERS-CA	0.25	0	0	0	-	-	0
CHMIRS-CA	0.0625	0	0	-	-	-	0
City-AST-CA	0.25	0	0	0	-	-	0
City-CUPA-CA	0.25	0	0	0	-	-	0
City-Others-CA	0.25	0	0	0	-	-	0
City-UST-CA	0.25	0	0	0	-	-	0
Controls-CA	0.5	0	0	0	0	-	0
CorAct-Closed-CA	0.5	0	0	0	0	-	0
CorAct-Open-CA	0.5	0	0	0	0	-	0
CORTESE-CA	0.25	0	0	0	-	-	0
County-AST-CA	0.25	0	0	0	-	-	0
County-Hist-CA	0.25	0	0	0	-	-	0
County-LUST-CA	0.5	0	0	0	0	-	0
County-LUST-Closed-CA	0.5	0	0	0	0	-	0
County-LUST-Open-CA	0.5	0	0	0	0	-	0
County-Others-CA	0.25	0	0	0	-	-	0

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STATE ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
County-SLIC-Closed-CA	0.25	0	0	0	-	-	0
County-SLIC-Open-CA	0.5	0	0	0	0	-	0
County-SML-CA	0.5	0	0	0	0	-	0
County-SWF-CA	0.5	0	0	0	0	-	0
County-UST-CA	0.25	0	0	0	-	-	0
CRSP-CA	0.25	0	0	0	-	-	0
CUPA-CA	0.25	0	0	0	-	-	0
Deed-CA	0.5	0	0	0	0	-	0
ENF-CA	0.25	0	0	0	-	-	0
ENF-SMARTS-CA	0.25	0	0	0	-	-	0
ENF-Wastewater-CA	0.25	0	0	0	-	-	0
Eval-Hist-CA	0.5	0	0	0	0	-	0
Eval-Hist-NFA-CA	0.5	0	0	0	0	-	0
HazWaste-CA	0.25	0	0	0	-	-	0
Hist-Controls-CA	0.5	0	0	0	0	-	0
Hist-Cort-CA	0.25	0	0	0	-	-	0
HIST-R4-CA	0.25	0	0	0	-	-	0
HIST-SLIC-CV-CLOSED-CA	0.5	0	0	0	0	-	0
HIST-SLIC-CV-OPEN-CA	0.5	0	0	0	0	-	0
Hist-SWF-CA	0.5	0	0	0	0	-	0
Hist-UST-CA	0.25	0	0	0	-	-	0
Hist-UST-Cleanup-CA	0.5	0	0	0	0	-	0
Hist-WIP-Active-CA	0.5	0	0	0	0	-	0
Hist-WIP-Backlog-CA	0.5	0	0	0	0	-	0
Hist-WIP-Historical-CA	0.5	0	0	0	0	-	0
HWIS-CA	0.0625	0	0	-	-	-	0
HWMP-Controls-CA	0.5	0	0	0	0	-	0
ICE-CA	0.25	0	0	0	-	-	0
Land-Disposal-CA	0.5	0	0	0	0	-	0
Liens-CA	0.0625	0	0	-	-	-	0
LUST-Closed-CA	0.5	0	0	0	0	-	0
LUST-Open-CA	0.5	0	0	0	0	-	0
Manifest2-RI	0.0625	0	0	-	-	-	0
Military-Active-CA	1	0	0	0	0	0	0
Military-NFA-CA	0.5	0	0	0	0	-	0
Military-Other-CA	1	0	0	0	0	0	0
PR-MOA-CA	0.25	0	0	0	-	-	0
Response-CA	1	0	0	0	0	0	0
School-Active-CA	0.5	0	0	0	0	-	0
School-NFA-CA	0.5	0	0	0	0	-	0
School-Other-CA	0.5	0	0	0	0	-	0
SLIC-Closed-CA	0.5	0	0	0	0	-	0
SLIC-Open-CA	0.5	0	0	0	0	-	0
SML-CA	0.5	0	0	0	0	-	0
State-Response-Active-CA	1	0	0	0	0	0	0
State-Response-NFA-CA	0.5	0	0	0	0	-	0
State-Response-Other-CA	0.5	0	0	0	0	-	0
Superfund-Active-CA	1	0	0	0	0	0	0
Superfund-NFA-CA	1	0	0	0	0	0	0
Superfund-Other-CA	1	0	0	0	0	0	0
SWIS-CA	0.5	0	0	0	0	-	0
SWRCY-CA	0.5	0	0	0	0	-	0
UST-Abandoned-CA	0.25	0	0	0	-	-	0
UST-CA	0.25	0	0	0	-	-	0
UST-Closed-CA	0.25	0	0	0	-	-	0

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STATE ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
USTComp-CA	0.25	0	0	0	-	-	0
UST-CRSP-CA	0.25	0	0	0	-	-	0
UST-Priority-CA	0.5	0	0	0	0	-	0
UST-Proposed-CA	0.25	0	0	0	-	-	0
VCP-Active-CA	0.5	0	0	0	0	-	0
VCP-NFA-CA	0.5	0	0	0	0	-	0
VCP-Other-CA	0.5	0	0	0	0	-	0

SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Air-CA	0.25	0	0	0	-	-	0
AIR-DIST-CA	0.25	0	0	0	-	-	0
BioFuel-US	0.25	0	0	0	-	-	0
CDL-CA	0.0625	0	0	-	-	-	0
CDL-US	0.0625	0	0	-	-	-	0
CHWF-CA	0.5	0	0	0	0	-	0
Cleaners-CA	0.25	0	0	0	-	-	0
Coal-Ash-Dams-US	0.5	0	0	0	0	-	0
County-BI-CA	0.25	0	0	0	-	-	0
Dams-CA	0.25	0	0	0	-	-	0
DPR-CA	0.25	0	0	0	-	-	0
DryCleaners-CA	0.25	0	0	0	-	-	0
EGRID-US	0.5	0	0	0	0	-	0
EPA-Watch-List-US	0.25	0	0	0	-	-	0
FA-HW-CA	0.0625	0	0	-	-	-	0
FA-HW-US	0.0625	0	0	-	-	-	0
FA-SWF-CA	0.0625	0	0	-	-	-	0
FRS-US	0.0625	0	0	-	-	-	0
FTTS-INSP-US	0.0625	0	0	-	-	-	0
FUDS-US	1	0	0	0	0	0	0
FUSRAP-US	0.25	0	0	0	-	-	0
Haulers-CA	0.0625	0	0	-	-	-	0
Hist-AFS2-US	0.25	0	0	0	-	-	0
Hist-AFS-US	0.25	0	0	0	-	-	0
Hist-AST-CA	0.25	0	0	0	-	-	0
Hist-AWS-CA	0.25	0	0	0	-	-	0
Hist-CA	0.0625	0	0	-	-	-	0
Hist-CalFID-CA	0.25	0	0	0	-	-	0
Hist-CALSITES-CA	0.25	0	0	0	-	-	0
Hist-CERCLIS-NFRAP-US	0.25	0	0	0	-	-	0
Hist-CERCLIS-US	0.25	0	0	0	-	-	0
Hist-City-UST-CA	0.25	0	0	0	-	-	0
Hist-Deed-CA	0.25	0	0	0	-	-	0
Hist-DTG-CA	0.25	0	0	0	-	-	0
Hist-ERNS-US	0.0625	0	0	-	-	-	0
Hist-FIFRA-US	0.25	0	0	0	-	-	0
Hist-FINDS-US	0.0625	0	0	-	-	-	0
Hist-HWS-CA	0.25	0	0	0	-	-	0
Hist-LUSTIS-CA	0.25	0	0	0	-	-	0
HIST-MLTS-US	0.25	0	0	0	-	-	0
HIST-MTBE-CA	0.25	0	0	0	-	-	0
Hist-NPL-US	0.25	0	0	0	-	-	0

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SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Orange-County-LF-CA	0.25	0	0	0	-	-	0
Historical-CA	0.5	0	0	0	0	-	0
Hist-Prop65-CA	0.25	0	0	0	-	-	0
Hist-RCRIS-US	0.25	0	0	0	-	-	0
Hist-Regional-LUST-CA	0.25	0	0	0	-	-	0
Hist-Regional-Other-CA	0.25	0	0	0	-	-	0
Hist-Regional-SLIC-CA	0.25	0	0	0	-	-	0
Hist-Regional-Spills-CA	0.25	0	0	0	-	-	0
Hist-Regional-SWLF-CA	0.25	0	0	0	-	-	0
Hist-Regional-UST-CA	0.25	0	0	0	-	-	0
Hist-SCL-CA	0.25	0	0	0	-	-	0
Hist-SWIS-CA	0.25	0	0	0	-	-	0
Hist-ToxicPits-CA	0.25	0	0	0	-	-	0
Hist-TRIS-US	0.25	0	0	0	-	-	0
Hist-US	0.0625	0	0	-	-	-	0
Hist-USGS-WaterWells-CA	0.0625	0	0	-	-	-	0
Hist-USTReg-CA	0.25	0	0	0	-	-	0
Hist-WaterWells-US	0.0625	0	0	-	-	-	0
Hist-WMUDS-CA	0.25	0	0	0	-	-	0
HWT-CA	0.25	0	0	0	-	-	0
ICIS-Air-US	0.0625	0	0	-	-	-	0
ICIS-FEC-US	0.0625	0	0	-	-	-	0
ICIS-NPDES-US	0.0625	0	0	-	-	-	0
LA-Waste-Haulers-CA	0.0625	0	0	-	-	-	0
Lead-Smelter-2-US	0.25	0	0	0	-	-	0
Lead-US	0.25	0	0	0	-	-	0
LMOP-US	0.5	0	0	0	0	-	0
Mines2-CA	0.0625	0	0	-	-	-	0
Mines-CA	0.0625	0	0	-	-	-	0
Mines-CDMG-CA	0.0625	0	0	-	-	-	0
MINES-US	0.0625	0	0	-	-	-	0
MLTS-US	0.0625	0	0	-	-	-	0
Mortgage-CA	0.25	0	0	0	-	-	0
MRDS-US	0.25	0	0	0	-	-	0
MWMP-CA	0.25	0	0	0	-	-	0
NEI-LF-CA	0.25	0	0	0	-	-	0
NPDES-CA	0.0625	0	0	-	-	-	0
NPDES-SW-CA	0.0625	0	0	-	-	-	0
OGM-CA	0.0625	0	0	-	-	-	0
OGW-CA	0.0625	0	0	-	-	-	0
OSCF-CA	0.5	0	0	0	0	-	0
PCS-US	0.25	0	0	0	-	-	0
Perch1-CA	0.25	0	0	0	-	-	0
Perch2-CA	0.25	0	0	0	-	-	0
RADINFO-US	0.0625	0	0	-	-	-	0
RFG-Lab-US	0.25	0	0	0	-	-	0
RMP-US	0.0625	0	0	-	-	-	0
ROD-US	0.5	0	0	0	0	-	0
SDWIS-US	0.25	0	0	0	-	-	0
Spills-SSO-CA	0.25	0	0	0	-	-	0
SSTS-US	0.0625	0	0	-	-	-	0
TierPer-CA	0.25	0	0	0	-	-	0
TOMS-CA	0.0625	0	0	-	-	-	0
Tribal-Air-US	0.25	0	0	0	-	-	0
TRIS2000-US	0.0625	0	0	-	-	-	0

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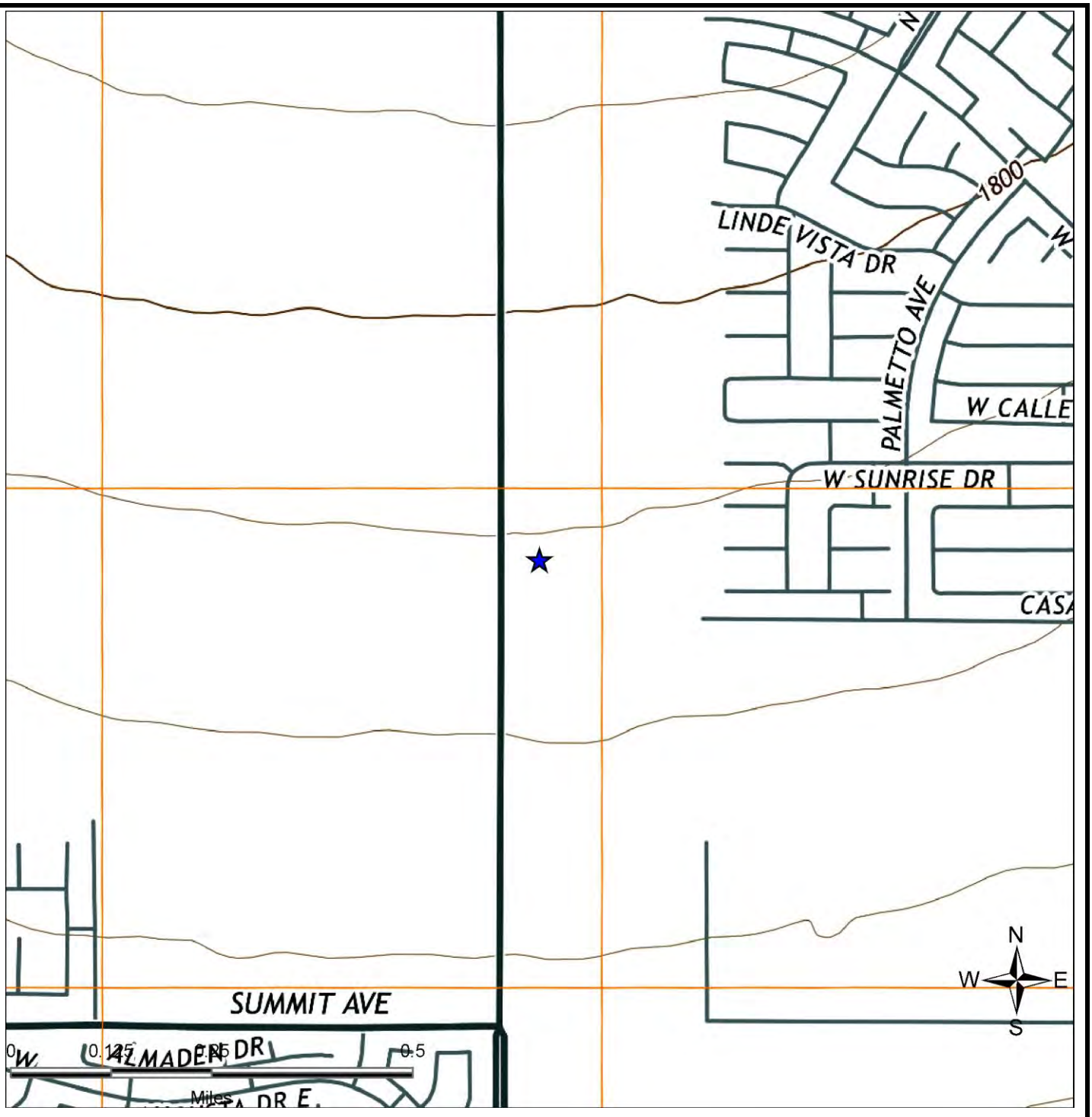
SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
TRIS2010-US	0.0625	0	0	-	-	-	0
TRIS80-US	0.0625	0	0	-	-	-	0
TRIS90-US	0.0625	0	0	-	-	-	0
TSCA-US	0.0625	0	0	-	-	-	0
UIC2-CA	0.0625	0	0	-	-	-	0
UIC-CA	0.0625	0	0	-	-	-	0
UMTRA-US	0.0625	0	0	-	-	-	0
USGS-Waterwells-US	0.0625	0	0	-	-	-	0
Vapor-Intrusions-US	0.5	0	0	0	0	-	0
WDR-CA	0.25	0	0	0	-	-	0
Wells-CA	0.0625	0	0	-	-	-	0

PROPRIETARY HISTORIC DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Agriculture	0.0625	0	0	-	-	-	0
Hist-Auto Dealers	0.0625	0	0	-	-	-	0
Hist-Auto Repair	0.25	0	0	0	-	-	0
Hist-Chemical Manufacturing	0.0625	0	0	-	-	-	0
Hist-Chemical-Storage	0.0625	0	0	-	-	-	0
Hist-Cleaners	0.25	0	0	0	-	-	0
Hist-Convenience	0.0625	0	0	-	-	-	0
Hist-Disposal-Recycle	0.0625	0	0	-	-	-	0
Hist-Food-Processors	0.0625	0	0	-	-	-	0
Hist-Gun-Ranges	0.0625	0	0	-	-	-	0
Hist-Machine Shop	0.0625	0	0	-	-	-	0
Hist-Manufacturing	0.0625	0	0	-	-	-	0
Hist-Metal Plating	0.0625	0	0	-	-	-	0
Hist-Mining	0.0625	0	0	-	-	-	0
Hist-Mortuaries	0.0625	0	0	-	-	-	0
Hist-Oil-Gas	0.0625	0	0	-	-	-	0
Hist-OilGas-Refiners	0.0625	0	0	-	-	-	0
Hist-Other	0.0625	0	0	-	-	-	0
Hist-Paint-Stores	0.0625	0	0	-	-	-	0
Hist-Petroleum	0.0625	0	0	-	-	-	0
Hist-Post-Offices	0.0625	0	0	-	-	-	0
Hist-Printers	0.0625	0	0	-	-	-	0
Hist-Rental	0.0625	0	0	-	-	-	0
Hist-RV-Dealers	0.0625	0	0	-	-	-	0
Hist-Salvage	0.0625	0	0	-	-	-	0
Hist-Service Stations	0.25	0	0	0	-	-	0
Hist-Steel-Metals	0.0625	0	0	-	-	-	0
Hist-Textile	0.0625	0	0	-	-	-	0
Hist-Transportation	0.0625	0	0	-	-	-	0
Hist-Trucking	0.0625	0	0	-	-	-	0
Hist-Vehicle-Parts	0.0625	0	0	-	-	-	0
Hist-Vehicle-Washing	0.0625	0	0	-	-	-	0

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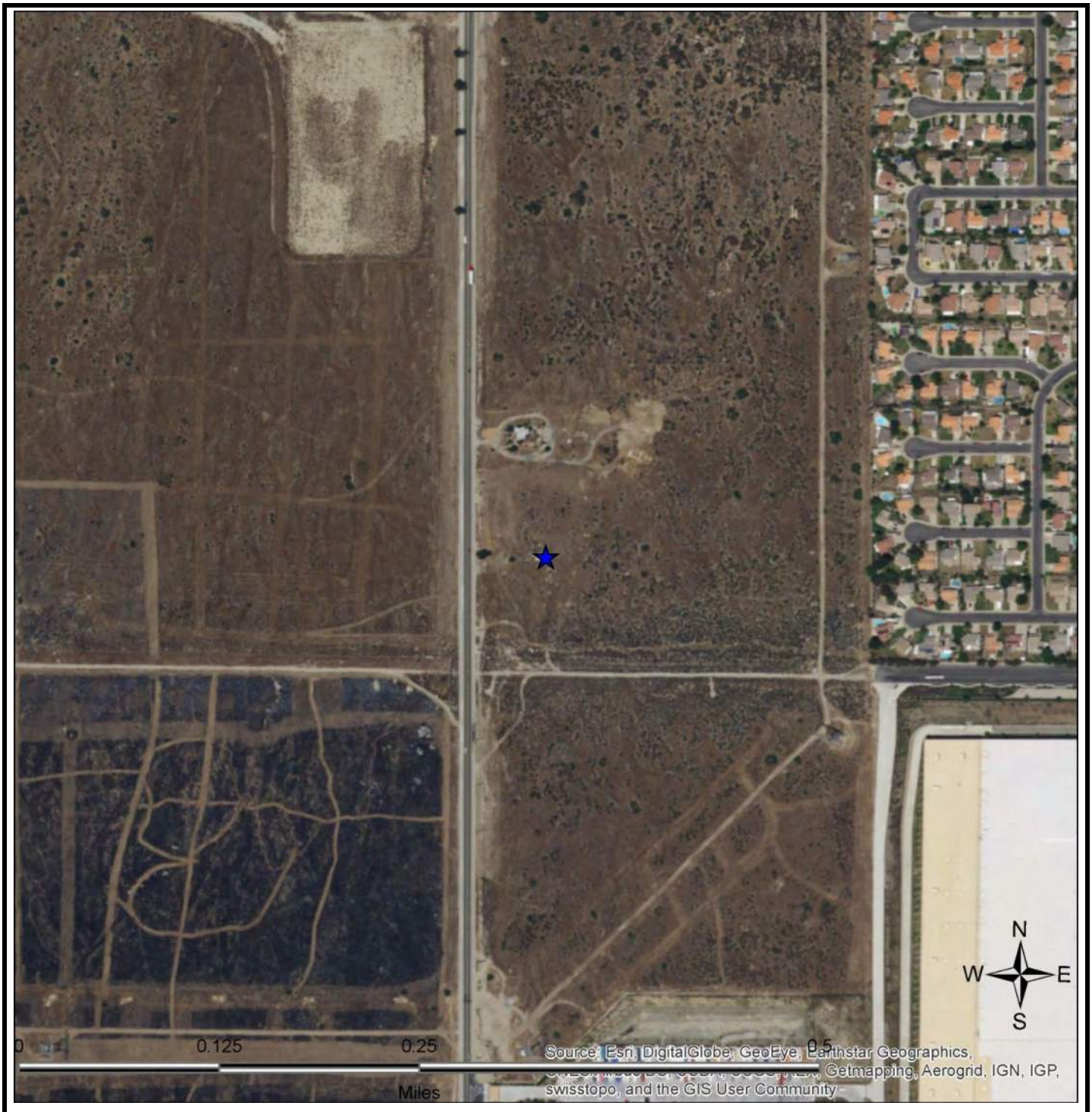


SITE LOCATION TOPOGRAPHIC MAP

U.S. Geological Survey. Devore (2015-03-17) Quadrangle, 7.5 Minute Series

S&S Commercial Environmental Services, Inc.	330 Feet North Of Ne Corner Sierra Ave And Casa Gr Fontana, CA 92336	FIGURE: 1 JOB: 2104691008 DATE: 11/18/2017

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SITE LOCATION MAP

S&S Commercial Environmental Services, Inc.	330 Feet North Of Ne Corner Sierra Ave And Casa Gr Fontana, CA 92336	FIGURE: 2 JOB: 2104691008 DATE: 11/18/2017

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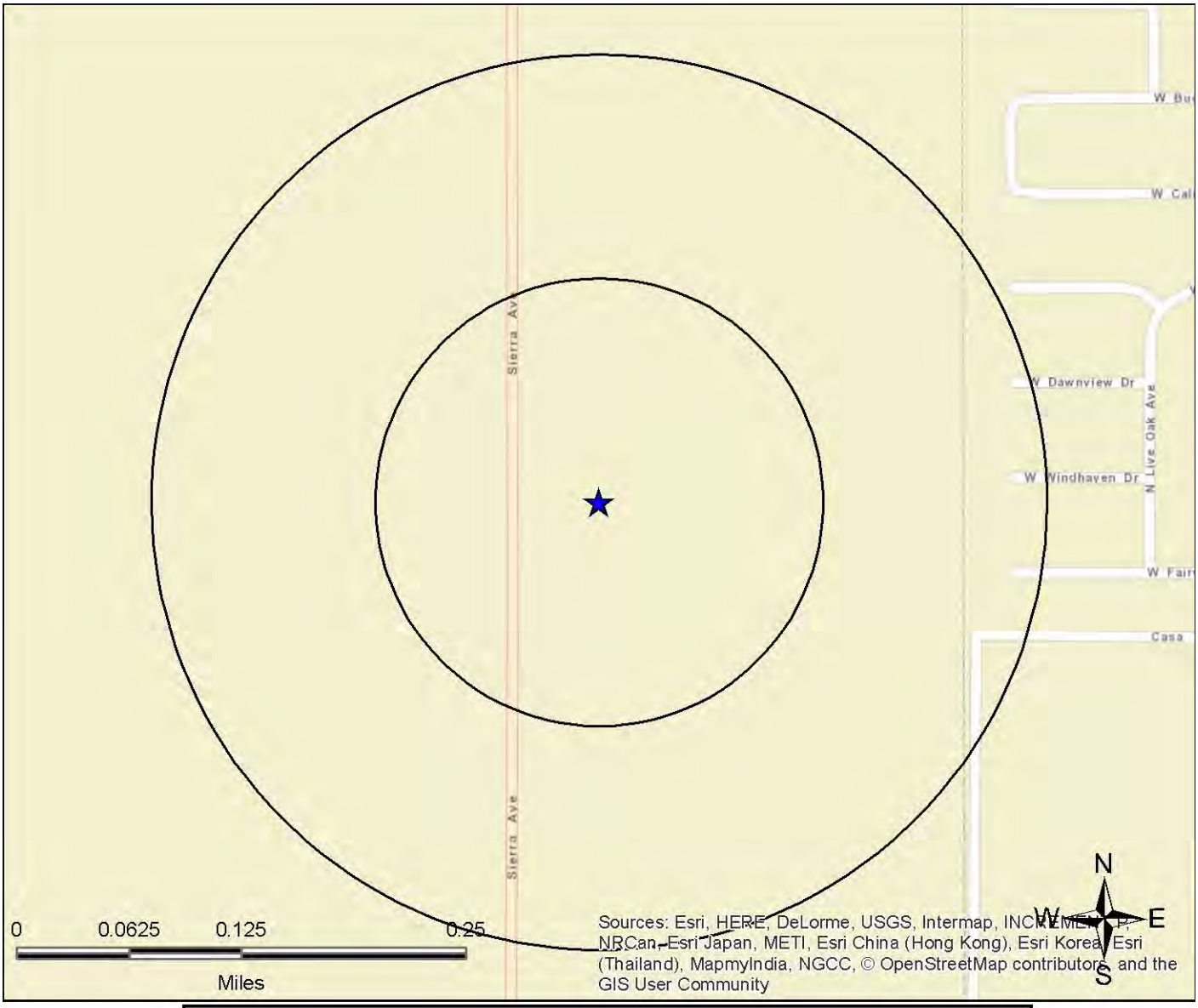
1-MILE RADIUS STREET MAP W/OCCURRENCES (MAP1)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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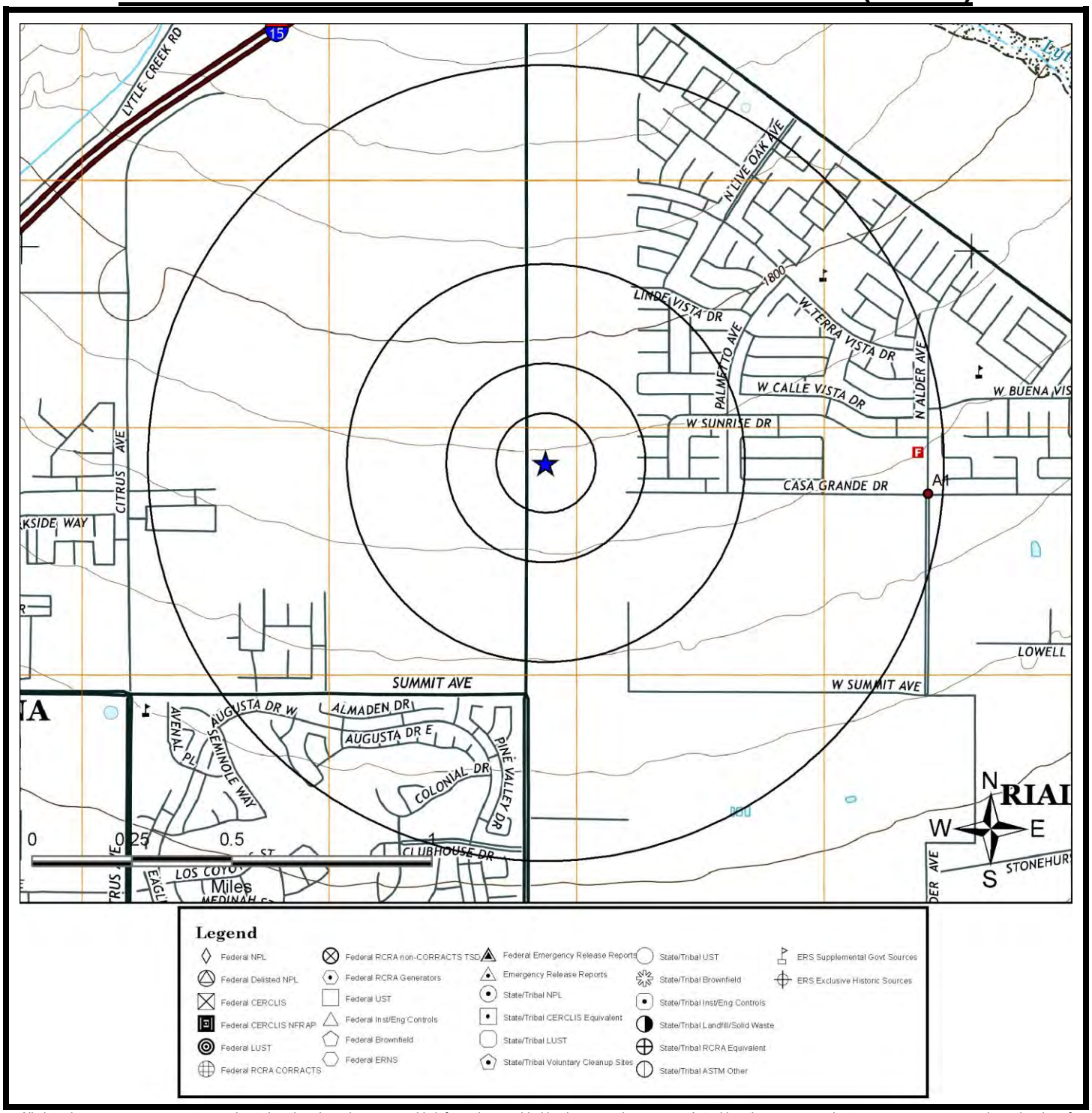
0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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1-MILE TOPOGRAPHIC MAP W/OCCURRENCES (MAP3)

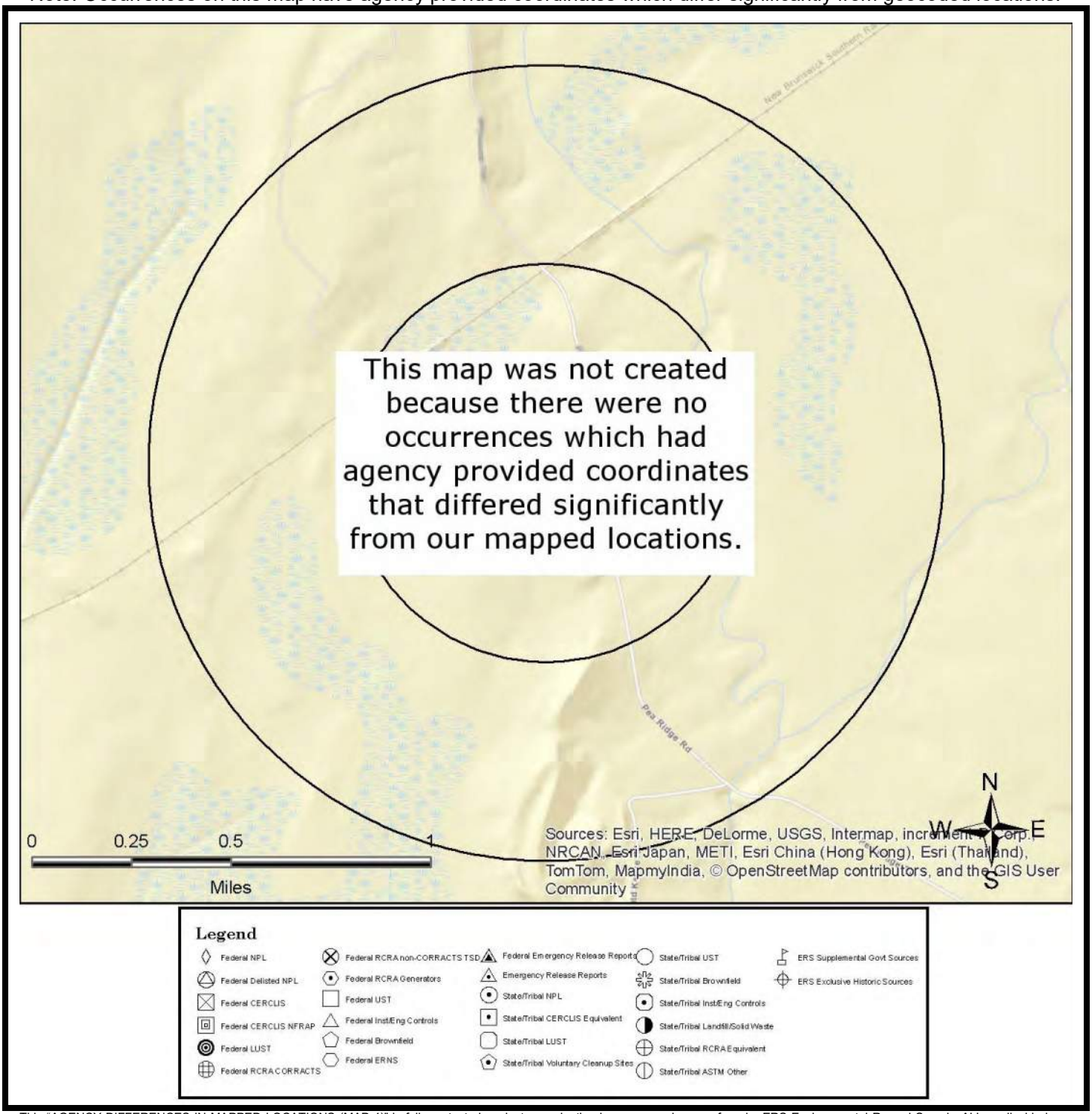


All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP4)

Note: Occurrences on this map have agency provided coordinates which differ significantly from geocoded locations.



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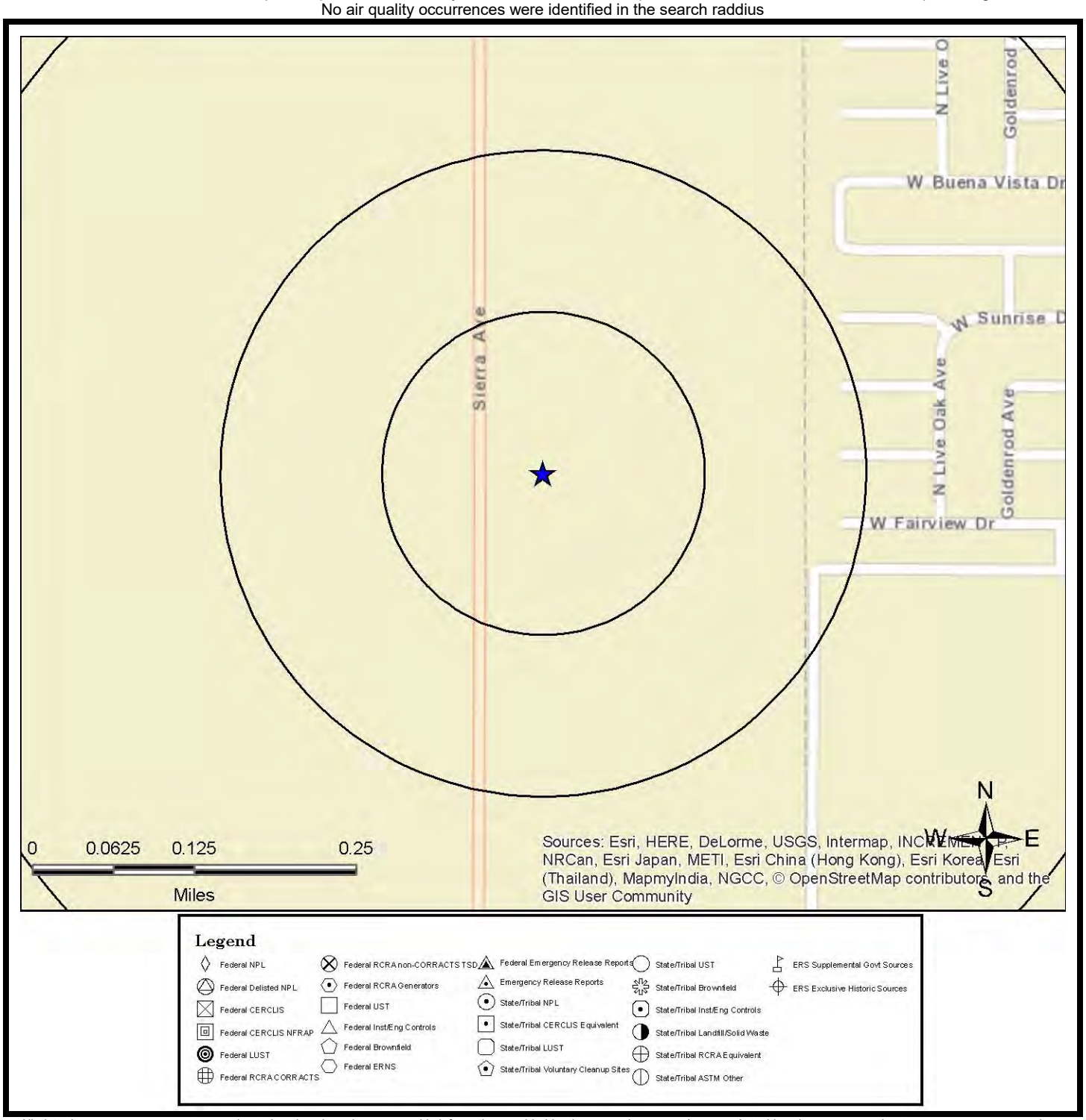
SUMMARY OF AGENCY DIFFERENCES

MAP ID	ID / SITE NAME	ADDRESS / DATABASE	AGENCY COORDINATES	DISTANCE (MILES)	DIRECTION
N/A	No occurrences were identified where the agency provided coordinates that differed significantly from our mapped locations.				

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MAPPED AIR PERMITS WITH POTENTIAL DISPERSION (MAP5)

Note: Occurrences on this map are reported in Air Quality databases. Potential air plumes are drawn in the direction of the prevailing wind.
No air quality occurrences were identified in the search raddius



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency/source. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Potential air dispersion plumes are depicted to graphically show the direction contaminates may travel based on prevailing wind data and provide a visual screening tool only. Actual direction will vary especially by season. Depending on the actual contaminate, amount released, and other variables, the distance from the source the contaminate may travel can and will vary. Interpretation and review of all the actual relevant data by an environmental professional is recommended before making any decisions, conclusions or otherwise based on the map depictions, air data, and potential air dispersion plumes.

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POTENTIAL AREAS OF CONCERN/CONTAMINATION (MAP6)

Note: Locations shown may represent site boundaries, contamination plumes, or other information. See descriptions in the Listed Occurrence Details for more information.

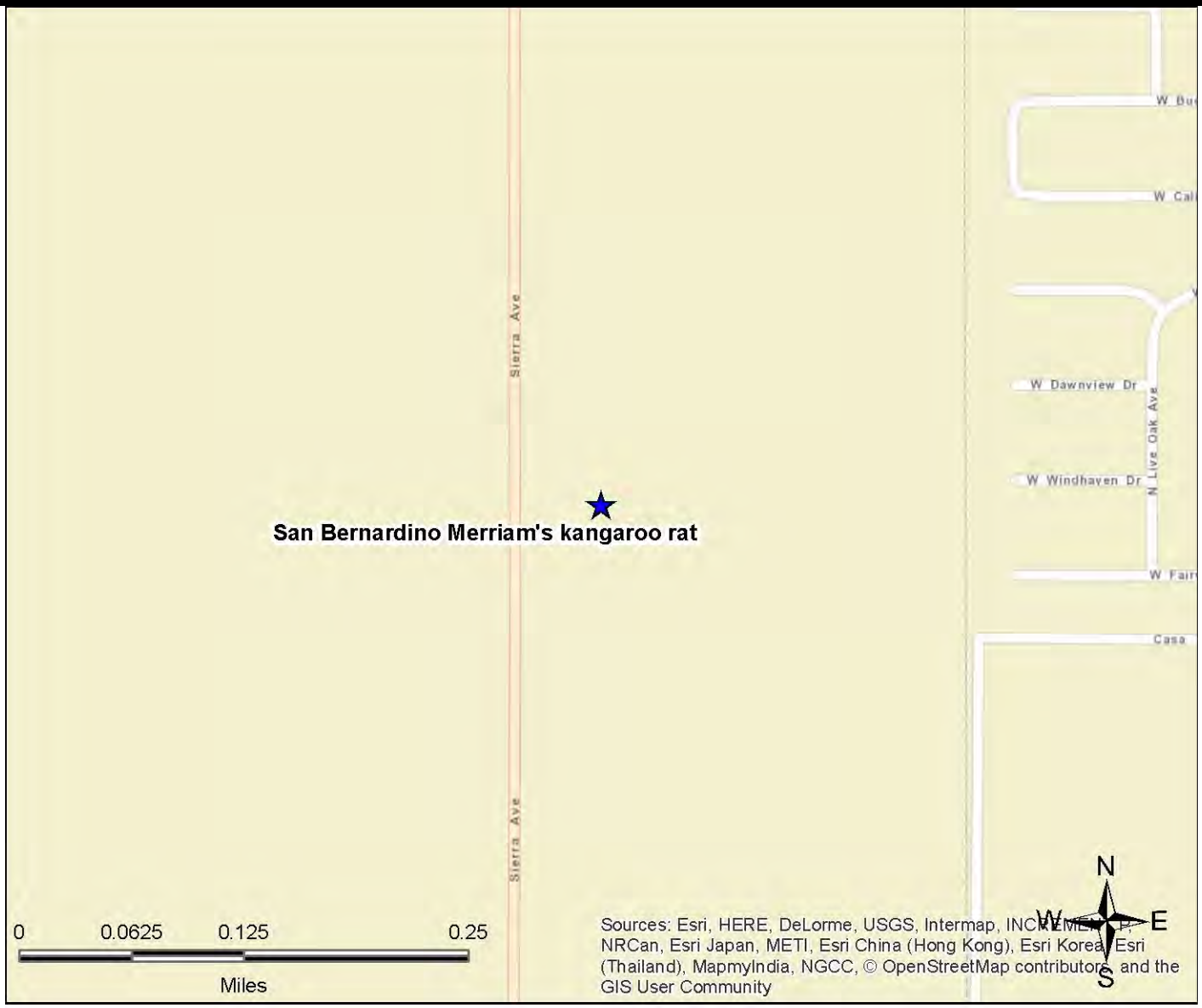


Legend

NPL-R9-US

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US FISH & WILDLIFE SERVICE, CRITICAL HABITATS



All plotted polygons represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc.

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LISTED OCCURRENCE DETAILS

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
NPL-R9-US	Currently on the Final NPL	0.97 miles E	N/A	A1
SITE NAME			**MAPS**	**ID**
B.F. GOODRICH			6	245
ADDRESS			**CITY**	**ZIP**
3196 NORTH LOCUST			RIALTO	

DETAILS

Site URL: http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0905945
NPL Status: Currently on the Final NPL
Cerclis ID: CAN000905945
NPL Name: B.F. GOODRICH
SubArea Name: Not Reported
Boundary Type: Site Boundary
Federal Facility Status: Private Site
COMMENTS: Not Reported
COUNTY: SAN BERNARDINO
SOURCE: GIS CENTER
Category Code: MP
Category Code Description: Manufacturing - Processing - Maintenance
Site sub-category code: OP
Site-sub category description: Ordnance Production
Human Exposure Status: Current Human Exposure Controlled
Site Status: Design Underway
EIS Human: HEUC

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RECORDS SOURCES SEARCHED

Air-CA
Air Permits with Emissions
Category: ERS Supplemental Govt Sources
Description: This database contains permitted facilities that report to the ARB by the different Air Quality Districts.
Agency: California Air Resources Board
Phone Number: 9163222990
Date last updated: 12/20/2016
Date last checked: 12/2/2016
Distance searched: 0.25 miles
Sites:
None Found

AIR-DIST-CA
Air Pollution Control District
Category: ERS Supplemental Govt Sources
Description: This database contains air permitted facilities as reported by various Air Quality and Air Pollution Control Districts in California.
Antelope Valley AQMD: (661) 723-8070
Butte AQMD: (530) 332-9400
Mariposa County APCD: (209) 966-2220
North Coast Unified AQMD: (707) 443-3093
Placer APCD: (530) 745-2330
Sacramento AQMD: (916) 874-4800
San Diego County APCD: (858) 586-2600
Santa Barbara APCD: (805) 961-8800
South Coast AQMD: (909) 396-2000
Agency: Local District Agencies
Phone Number: 7146698096
Date last updated: 10/20/2017
Date last checked: 9/27/2017
Distance searched: 0.25 miles
Sites:
None Found

AST-CA
Aboveground Storage Tanks
Category: State/Tribal UST
Description: This database includes aboveground storage tanks previously maintained by the California EPA. The data is historic as AST's are now tracked by local county offices.
Agency: California Environmental Protection Agency

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Phone Number: 9163232514
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

AST-CRSP-CA
Aboveground Storage Tanks
Category: State/Tribal UST
Description: Aboveground Storage Tanks listed on the CalEPA Regulated Site Portal. The portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. For information on a particular site, contact the appropriate agency:
California Environmental Reporting System (CERS): cers@calepa.ca.gov
California Integrated Water Quality System (CIWQS): 866-79-CIWQS
EnviroStor Cleanup/Haz Waste: 877-786-9427
GeoTracker: 866-480-1028
Toxics Release Inventory (TRI): 800-424-9346
Agency: Cal EPA
Phone Number: 9164455049
Date last updated: 11/8/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

BF-MOA-CA
Brownfield MOA Sites (aka Considered Brownfield Sites, SWRCB MOA, Brownfield Memorandum of Agreement)
Category: State/Tribal Brownfield
Description: In order to improve coordination of oversight activities at brownfields sites in California, DTSC, the Water Board, and the RWQCBs agreed to a Brownfield Memorandum of Agreement (MOA). The MOA limits oversight of a brownfields site to one agency, establishes procedures and guidelines for identifying the lead agency, calls for a single uniform site assessment procedure, requires all cleanups to address the requirements of the agencies, defines roles and responsibilities, provides for ample opportunity for public involvement, commits agencies to review timeframes, and commits agencies to coordinate and communicate on brownfields issues. This database contains facilities that fall under the MOA as reported by the State Water Resource Controls Board.
Agency: State Water Resource Controls Board
Phone Number: 9163415455
Date last updated: 11/1/2017
Date last checked: 10/26/2017
Distance searched: 0.5 miles
Sites:

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None Found

BF-Tribal-US
Tribal Brownfields
Category: Federal Brownfield
Description: The EPA's Brownfields Program is designed to empower states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. This database contains a listing of Brownfields on Native American Land identified by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 2025662777
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

BF-US
Brownfields Sites
Category: Federal Brownfields
Description: Brownfields are properties that may have hazardous substances, pollutants or contaminants present. EPA's Brownfields Program provides grants and technical assistance to communities, states, tribes and others to assess, safely clean up and sustainably reuse these contaminated properties. This database contains listings of Brownfields sites listed under the "Cleanups in My Community" program maintained by EPA.
Agency: United States Environmental Protection Agency
Phone Number: 2025662777
Date last updated: 9/13/2017
Date last checked: 8/24/2017
Distance searched: 0.5 miles
Sites:
None Found

BioFuel-US
Bio Diesel Fuel
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of EPA Fuels Programs facilities.
Agency: United States Environmental Protection Agency
Phone Number: 2023439303
Date last updated: 1/13/2017
Date last checked: 1/6/2017
Distance searched: 0.25 miles

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Sites:
None Found

BZ-HazWaste-CA
Border Zone or Hazardous Waste Property
Category: State/Tribal ASTM Other
Description: This database Identifies properties that went through the Border Zone Property or Hazardous Waste Property process of evaluation as reported by California Department of Toxic and Substance Control. Potential Border Zone properties are located within 2,000 feet of a significant disposal of hazardous waste; Hazardous Waste Property facilities/sites have a significant disposal of hazardous waste.
Agency: California Department of Toxic Substances Control.
Phone Number: 8007286942
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

CDL-CA
Clandestine Drug Labs
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of Clandestine Drug Lab locations. This listing includes active and inactive cases, as well as, labs that need maintenance.
Agency: California Department of Toxic Substances Control
Phone Number: 9162556572
Date last updated: 8/24/2017
Date last checked: 8/17/2017
Distance searched: 0.063 miles
Sites:
None Found

CDL-US
National Clandestine Drug Lab Register
Category: ERS Supplemental Govt Sources
Description: National Clandestine Drug Lab Register. This database contains a listing of addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites.
Agency: Unites States Drug Enforcement Administration
Phone Number: 2023071000
Date last updated: 1/16/2017
Date last checked: 1/9/2017
Distance searched: 0.063 miles
Sites:

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None Found

CERCLIS-Archived-US
CERCLIS sites that have been archived
Category: Federal CERCLIS NFRAP
Description: The Superfund Enterprise Management System (SEMS). The reports produced by SEMS contain information on the assessment and remediation of current and archived hazardous waste sites. The archived designation means that to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates that this decision was not appropriate or other considerations require a recommendation for listing at a later time. Information provided to the previous CERCLIS Legacy System has been added to the details of the sites.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 9/13/2017
Date last checked: 8/28/2017
Distance searched: 0.5 miles
Sites:
None Found

CERCLIS-US
Comprehensive Environmental Response, Compensation, and Liability Information System
Category: Federal CERCLIS
Description: The Superfund Enterprise Management System (SEMS). The reports produced by SEMS contain information on the assessment and remediation of current hazardous waste sites. Information provided to the previous CERCLIS Legal System has been added to the details of the sites.
Agency: ``
Phone Number: 8004249346
Date last updated: 9/13/2017
Date last checked: 8/28/2017
Distance searched: 0.5 miles
Sites:
None Found

CERS-CA
California Environmental Reporting System (CERS)
Category: State/Tribal ASTM Other
Description: The California Environmental Reporting System (CERS) is a statewide web-based system to support California Unified Program Agencies (CUPAs) and Participating Agencies (PAs) in electronically collecting and reporting various hazardous materials-related data as mandated by the California Health and Safety Code and new 2008 legislation (AB 2286). Under oversight by Cal/EPA, CUPAs implement Unified Program mandates that streamline and provide consistent regulatory activities. Cal/EPA does not provide phone support. Your primary contact should always be your CUPA or PA. The database includes the following counties:

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Amador
Calaveras
Contra Costa
Fresno
Glenn
Humboldt
Los Angeles
Los Angeles – Vernon City
Los Angeles – Torrance City
Los Angeles – Santa Fe Springs
Madera
Mendocino
Mono
Nevada (Agency no longer provides update as of Aug 2016)
Orange (Agency no longer provides update as of March 2017)
San Bernardino
Santa Clara
Santa Cruz
San Francisco
San Luis Obispo
Santa Clara
Solano
Sonoma
Sutter
Tuolumne
Ventura
Agency: California Environmental Protection Agency
Phone Number: 9164455049
Date last updated: 9/21/2017
Date last checked: 9/1/2017
Distance searched: 0.25 miles
Sites:
None Found

CHMIRS-CA
California Hazardous Material Incident Report System
Category: Emergency Release Reports
Description: This database contains California's Haz Mat spill notifications reported to the California Office of Emergency Service since 1993.
Agency: Governor's Office of Emergency Service
Phone Number: 9168458768
Date last updated: 10/26/2017
Date last checked: 10/26/2017
Distance searched: 0.063 miles
Sites:
None Found

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CHWF-CA
Commercial Offsite Hazardous Waste Facilities
Category: ERS Supplemental Govt Sources
Description: This list contains Commercial Recycling Facilities that accept hazardous materials/waste such as: Batteries, Plastics, Oil, Lamps, Metals, Paint related waste etc. Some of the facilities listed handle more than one material. For more information on the facility go to the Facility website listed on the details section.
Agency: Department of Toxic Substance Control
Phone Number: 8777869427
Date last updated: 8/7/2017
Date last checked: 7/20/2017
Distance searched: 0.5 miles
Sites:
None Found

City-AST-CA
Underground Storage Tanks
Category: State/Tribal UST
Description: This database contains registered Aboveground Storage Tanks reported by city agencies. The following is contact information for the respective cities:
Alameda, Union City: 510-567-6704
Alameda, Hayward City: 510 583-4924
Alameda, San Leandro City: 510-577-3401
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 6/30/2017
Date last checked: 6/26/2017
Distance searched: 0.25 miles
Sites:
None Found

City-CUPA-CA
Certified Unified Program Agency
Category: State/Tribal ASTM Other
Description: The records in this database come from city CUPA listings. The CUPA program provides oversight for the following statewide environmental programs: Hazardous Waste, Hazardous Materials Business Plan, California Accidental Release Prevention Program, UST, AST, and Onsite Hazardous Waste Treatment. The following is contact information for the respective CUPA cities:
Alameda, Union City: (510) 675-5367
Alameda, San Leandro City: (510) 577-3401
Alameda, Hayward City: (510) 583-4924
Sonoma, Santa Rosa City: (707) 543-3537
Sonoma, Healdsburg City: (707) 431-3125

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Sonoma, Petaluma City: (707) 778-4389
Sonoma, Sebastopol City: (707) 431-3125
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 6/30/2017
Date last checked: 6/26/2017
Distance searched: 0.25 miles
Sites:
None Found

City-Others-CA
Hazardous Material Facilities
Category: State/Tribal ASTM Other
Description: This database contains facilities reported by city agencies. Respective database/listing name is mentioned in the details section of the occurrence.
Santa Clara – San Jose City: 408-535-7694
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 12/2/2016
Date last checked: 11/18/2016
Distance searched: 0.25 miles
Sites:
None Found

City-UST-CA
City Agency Underground Storage Tanks
Category: State/Tribal UST
Description: This database contains registered Underground Storage Tanks reported by city agencies. The following is contact information for the respective cities:
Alameda County, Union City: 510-675-5358
http://www.ci.union-city.ca.us/departments/economic-community-development/environmental-programs/cupa/underground-storage-tanks
Alameda County, Berkeley: 510-981-7500
http://www.ci.berkeley.ca.us/Planning_and_Development/Toxics_Management/Underground_Storage_Tank_Program.aspx
Alameda County, Hayward: 510-583-4924
https://www.hayward-ca.gov/services/permits/underground-storage-tank-ust
Alameda County, San Leandro: 510-577-3401
http://www.sanleandro.org/depts/pw/env/envhazmat.asp
Los Angeles County, El Segundo: 310-524-2242
http://www.elsegundo.org/depts/fire/enviro/default.asp
Los Angeles County, Long Beach: 562-570-2588
http://www.longbeach.gov/fire/fire-prevention/cupa/
Los Angeles County, Torrance: 310-618-2973
http://www.torranceca.gov/TFD/12958.htm

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Sonoma County, Santa Rosa: 707-543-3500 707-565-6571
http://ci.santa-rosa.ca.us/departments/fire/prevention/Pages/default.aspx
Kern County, Bakersfield: 661-326-3979
http://www.bakersfieldcity.us/gov/depts/fire_/fire_prevention.htm
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: 6/30/2017
Date last checked: 6/26/2017
Distance searched: 0.25 miles
Sites:
None Found

Cleaners-CA
Cleaners
Category: ERS Supplemental Govt Sources
Description: This database contains dry cleaner locations reported by Reference USA GOV.
Agency: Reference USA GOV
Phone Number: 8005555211
Date last updated: 11/3/2017
Date last checked: 11/2/2017
Distance searched: 0.25 miles
Sites:
None Found

Coal-Ash-Dams-US
Coal Ash Contaminated Sites and Hazard Dams
Category: ERS Supplemental Govt Sources
Description: This database contains coal ash contaminated sites and hazard dams. Coal combustion waste sites have contaminated groundwater, wetlands, and rivers. The U.S. EPA rates coal ash ponds according to a National Inventory of Dams criteria that categorizes the ponds by the damage that would occur in the event of a dam failure. This database contains High Hazard and Significant Hazard dams.
Agency: EarthJustice
Phone Number: 8005846460
Date last updated: 8/24/2017
Date last checked: 8/24/2017
Distance searched: 0.5 miles
Sites:
None Found

Controls-CA
California sites with Deed Restrictions or other Controls
Category: State/Tribal Inst/Eng Controls

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Description: A deed restricted site is a property where DTSC has placed limits or requirements on future use of the property due to varying levels of cleanup possible, practical, or necessary at the site. The DTSC Site Mitigation and Brownfield's Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. Not all deed restrictions are available at this time.
Agency: California Department of Toxic Substances Control
Phone Number: 9162553745
Date last updated: 10/31/2017
Date last checked: 10/26/2017
Distance searched: 0.5 miles
Sites:
None Found

Controls-RCRA-US
RCRA Institutional and Engineering Controls Summary (aka Federal RCRA with Controls)
Category: Federal Institutional/Engineering Controls
Description: The Institutional and Engineering Controls Summary provides a listing of all RCRA sites with Institutional and/or Engineering Controls in place. Institutional Controls (IC) are defined as non-engineered and/or legal controls that minimize the potential human exposure to contamination by limiting land or resource use. Whereas, Engineering Controls (EC) consist of engineering measures (e.g, caps, treatment systems, etc.) designed to minimize the potential for human exposure to contamination by either limiting direct contact with contaminated areas or controlling migration of contaminants through environmental media.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 9/13/2017
Date last checked: 8/24/2017
Distance searched: 0.5 miles
Sites:
None Found

Controls-US
US CERCLA Sites with Controls (aka US IC/EC, Institutional/Engineering List Controls, Land Use Controls)
Category: Federal Institutional/Engineering Controls
Description: Institutional controls (IC) are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Engineering Controls (EC) consist of engineering measures (e.g, caps, treatment systems, etc.) designed to minimize the potential for human exposure to contamination by either limiting direct contact with contaminated areas or controlling migration of contaminants through environmental media. This database contains listings of sites from official CERCLA decision documents with Engineering Controls and/or Institutional Controls placed on them.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346

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Date last updated: 9/7/2017
Date last checked: 9/7/2017
Distance searched: 0.5 miles
Sites:
None Found

CorAct-Closed-CA
Corrective Action Sites
Category: State/Tribal ASTM Other
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is investigation or cleanup activities at Resource Conservation and Recovery Act (RCRA) or state-only hazardous waste sites reported by the California Department of Toxic and Substance Control with a status of Closed.
Agency: California Department of Toxic and Substance Control.
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

CorAct-Open-CA
Corrective Action Sites
Category: State/Tribal ASTM Other
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is investigation or cleanup activities at Resource Conservation and Recovery Act (RCRA) or state-only hazardous waste sites reported by the California Department of Toxic and Substance Control with a status of Open.
Agency: California Department of Toxic and Substance Control.
Phone Number: 9164643291
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

CORTESE-CA
Cortese Hazardous Waste & Substances Sites List
Category: State/Tribal ASTM Other

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Description: The Hazardous Waste and Substances Sites (Cortese) List is a planning resource used by the State, local agencies, and developers to comply with the California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites. These sites are active or backlogged on remediation and may also be listed on other CA databases.
Agency: California Department of Toxic Substances Control
Phone Number: 8007286942
Date last updated: 10/31/2017
Date last checked: 10/26/2017
Distance searched: 0.25 miles
Sites:
None Found

County-AST-CA
Aboveground Storage Tanks
Category: State/Tribal UST
Description: This database contains registered Underground Storage Tanks reported by county agencies. The following is contact information for the respective counties:
Alameda: 510-567-6700
Amador: 209-223-6439
Butte: 530-538-7281
Contra Costa: 925-335-3200
Del Norte: 707-465-0426
Humboldt: 707-268-2204
Imperial: 760-352-0381
Inyo: 760-878-0264
Kern: 661-862-8748
Kings: 559-584-1411
Lake: 707-263-1164
Los Angeles: 626-458-5100
Marin: 415-473-7085
Merced: 209-381-1100
Mendocino: 707-234-6625
Mono: 760-924-1830
Napa: 707-253-4471
Orange: 714-433-6000
Placer: 530-745-2350
Riverside: 951 955-8980
San Bernardino: 909-386-8400
San Joaquin: 209-468-3451
San Luis Obispo: 805-781-5544
San Mateo: 650-372-6200
Santa Clara: 408-918-3400
Santa Cruz: 831-454-2022
Solano: 707-784-6765
Sonoma: 707-565-6571
Sutter: 530-822-7400

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Tuolumne: 209-533-5633
Trinity: 866-348-0028
Ventura: 805-654-2815
Yolo: 530-666-8646
Yuba: 530-749-5450
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 10/20/2017
Date last checked: 10/9/2017
Distance searched: 0.25 miles
Sites:
None Found

County-BI-CA
Business Inventory
Category: ERS Supplemental Govt Sources
Description: This database contains Business Inventory listing reported by county agencies of California. List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks
San Mateo: 650-372-6200
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 8/24/2017
Date last checked: 8/1/2017
Distance searched: 0.25 miles
Sites:
None Found

County-Hist-CA
Historic County Listings
Category: State/Tribal ASTM Other
Description: This database contains historic databases reported by county agencies.
San Diego: 619-505-6921
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

County-LUST-CA
County Agency Leaking Underground Storage Tanks
Category: State/Tribal LUST

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Description: This database contains leaking underground storage tanks reported by county agencies in California. The reporting agency has not provided the status, the case has been referred to the SWRCB, or the agency no longer updates their LUST database and has referred it to Geotracker. The following is contact information for the respective counties:
Alameda: 510-567-6702
Riverside: 951 955-8980
San Joaquin: 209-468-3451
Sonoma: 707-565-6565
Stanislaus: 209-525-6700
Ventura: 805-654-2815
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 11/2/2017
Date last checked: 10/30/2017
Distance searched: 0.5 miles
Sites:
None Found

County-LUST-Closed-CA
County Agency Leaking Underground Storage Tanks, Closed Cases
Category: State/Tribal LUST
Description: This database contains leaking underground storage tanks reported by county agencies in California as being closed. The following is contact information for the respective counties:
Alameda: 510-567-6702
Del Norte: 707-465-0426
Humboldt: 707-445-6215
Napa: 707-253-4471
Riverside: 951 955-8980
San Francisco: 415-252-3900
San Mateo: 650-372-6200
Santa Clara: 408-918-3400
Sonoma: 707-565-6565
Orange: 714-433-6000
San Diego: 858-505-6880
San Joaquin: 209-468-3451
Solano: 707-784-3314
Stanislaus: 209-525-6700
Tulare: 559-624-7400
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 7/21/2017
Date last checked: 10/18/2017
Distance searched: 0.5 miles
Sites:
None Found

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County-LUST-Open-CA
County Agency Leaking Underground Storage Tanks, Open Cases
Category: State/Tribal LUST
Description: This database contains leaking underground storage tanks reported by county agencies in California as open cases. The following is contact information for the respective counties:
Alameda: 510-567-6702
Del Norte: 707-465-0426
Humboldt: 707-445-6215
Napa: 707-253-4471
Riverside: 951 955-8980
San Francisco: 415-252-3900
San Mateo: 650-372-6200
Santa Clara: 408-918-3400
Sonoma: 707-565-6571
Orange: 714-433-6000
San Diego: 858-505-6818
San Joaquin: 209-468-3451
Solano: 707-784-6765
Stanislaus: 209-525-6700
Tulare: 559-624-7400
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 7/21/2017
Date last checked: 10/18/2017
Distance searched: 0.5 miles
Sites:
None Found

County-Others-CA
Various County Files
Category: State/Tribal ASTM Other
Description: This database contains facilities reported by county agencies. Respective database/listing name is mentioned in the details section of the occurrence.
Sacramento: 916-875-8484
San Joaquin: 209-468-3420
Ventura: 805-654-2815
Solano: 707-784-6765
Napa: 707-253-4471
Alameda: 510-567-6700
Placer: 530-745-2350
Contra Costa: 925-313-6636
San Bernardino: 909-386-8401
Riverside: 951-358-7018
Orange: 714-433-6000
Los Angeles: 626-458-5100

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San Diego: 858-874-7000
Shasta: 530-225-5787
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 8/24/2017
Date last checked: 8/1/2017
Distance searched: 0.25 miles
Sites:
None Found

County-SLIC-Closed-CA
County SLIC Sites
Category: Emergency Release Reports
Description: This database contains Spills, Leaks, Investigations, and Cleanups (SLIC) Program sites reported as closed by county agencies. The following is contact information for the respective counties:
Alameda: 510-567-6700
Solano: 707-784-6765
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 11/2/2017
Date last checked: 10/30/2017
Distance searched: 0.25 miles
Sites:
None Found

County-SLIC-Open-CA
County SLIC Sites
Category: Emergency Release Reports
Description: This database contains Spills, Leaks, Investigations, and Cleanups (SLIC) Program sites reported as open by county agencies. The following is contact information for the respective counties:
Alameda: 510-567-6700
Solano: 707-784-6765
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 11/2/2017
Date last checked: 10/30/2017
Distance searched: 0.5 miles
Sites:
None Found

County-SML-CA
County Site Mitigation Unit List
Category: State/Tribal ASTM Other

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Description: This database contains sites listed by the Site Mitigation Unit program at various county agencies. The following is contact information for the respective counties:
Santa Barbara: 805-346-8359
Santa Cruz: 831-454-2761
San Joaquin: 209-468-3451
Solano: 707-784-6765
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 7/21/2017
Date last checked: 7/20/2017
Distance searched: 0.5 miles
Sites:
None Found

County-SWF-CA
County Solid Waste Facilities
Category: State/Tribal Landfill/Solid Waste
Description: This database contains a listing of solid waste facilities reported by county agencies. The following is the contact information for the respective counties:
Alameda: 510-567-6700
Los Angeles: 562-908-4288
Napa: 707-257-9200
San Diego: 858-694-2888
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 11/2/2017
Date last checked: 10/30/2017
Distance searched: 0.5 miles
Sites:
None Found

County-UST-CA
County Agency Underground Storage Tanks
Category: State/Tribal UST
Description: This database contains registered Underground Storage Tanks reported by county agencies. The following is contact information for the respective counties:
Alameda: 510-567-6702
Amador: 209-223-6439
Butte: 530-538-7281
Contra Costa: 925-335-3200
Del Norte: 707-465-0426
Humboldt: 707-445-6215
Imperial: 760-352-0381
Inyo: 760-878-0264
Kern: 661-862-8740

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Kings: 559-584-1411
Lake: 707-263-1164
Los Angeles: 626-458-3517
Marin: 415-473-7085
Merced: 209-381-1100
Mendocino: 707-234-6625
Mono: 760-924-1830
Napa: 707-253-4471
Orange: 714-433-6000
Placer: 530-745-2300
Riverside: 951 955-8980
San Bernardino: 909-387-5950
San Diego: 858-505-6880
San Joaquin: 209-468-3451
San Luis Obispo: 805-781-5544
San Mateo: 650-372-6200
Santa Clara: 408-918-3400
Santa Cruz: 831-454-2022
Solano: 707-784-6765
Sonoma: 707-565-6565
Sutter: 530-822-7400
Tuolumne: 209-533-5633
Trinity: 866-352-0381
Ventura: 805-654-2815
Yolo: 530-666-8646
Yuba: 530-749-5450
Agency: Various County Agencies
Phone Number: 7146698096
Date last updated: 10/20/2017
Date last checked: 10/9/2017
Distance searched: 0.25 miles
Sites:
None Found

CRSP-CA
Cal EPA Regulated Site Portal
Category: State/Tribal UST
Description: The portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. For information on a particular site, contact the appropriate agency:
California Environmental Reporting System (CERS): cers@calepa.ca.gov
California Integrated Water Quality System (CIWQS): 866-79-CIWQS
EnviroStor Cleanup/Haz Waste: 877-786-9427
GeoTracker: 866-480-1028
Toxics Release Inventory (TRI): 800-424-9346
Agency: Cal EPA

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Phone Number: 9164455049
Date last updated: 8/30/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

CUPA-CA
Certified Unified Program Agency
Category: State/Tribal ASTM Other
Description: The records in this database come from county CUPA listings. The CUPA program provides oversight for the following statewide environmental programs: Hazardous Waste, Hazardous Materials Business Plan, California Accidental Release Prevention Program, UST, AST, and Onsite Hazardous Waste Treatment. The following is contact information for the respective CUPA counties:
Alpine: 530-694-2235
Amador: 209-223-6439
Butte: 530-538-7281
Calaveras: 209-754-6399
Colusa: 530-458-0395
Del Norte: 707-465-0426
El Dorado: 530-621-5300
Fresno: 559-600-3271
Humboldt: 707-445-6215
Imperial: 760-352-0381
Inyo: 760-878-0238
King: 559-584-1411
Lake: 707-263-1164
Madera: 559-675-7823
Marin: 415-473-7085
Mendocino: 707-234-6625
Merced: 209-381-1100
Mono: 760-924-1830
Monterey: 831-755-4511
Napa: 707-253-4471
Nevada: 530-265-7134
San Bernardino: 909-386-8401
San Diego: 858-505-6880
San Luis Obispo: 805-781-5544
Santa Clara: 408-918-3400
Santa Cruz: 831-454-2022
Shasta: 530-225-5787
Solano: 707-784-3314
Sonoma: 707-565-1152
Sutter: 530-822-7400
Trinity: 866-348-0028
Tuolumne: 209-533-5633

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Ventura: 805-654-2823
Yuba: 530-749-5450
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: 10/20/2017
Date last checked: 10/9/2017
Distance searched: 0.25 miles
Sites:
None Found

Dams-CA
California Dams
Category: ERS Supplemental Govt Sources
Description: This database contains dam locations in California. The data is provided by the University of Arizona Institutional Repository and has not been updated since 1996. *NEEDS TO BE REVISED*
Agency: United States Environmental Protection Agency
Phone Number: 2022607301
Date last updated: 9/14/2017
Date last checked: 8/30/2017
Distance searched: 0.25 miles
Sites:
None Found

Debris-US
Debris Sites
Category: Federal Solid Waste
Description: This database contains the Torres Martinez Reservation Illegal dump sites reported by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Deed-CA
Deed Restrictions/Land Use Restrictions
Category: State/Tribal Inst/Eng Controls
Description: This database includes sites as reported by the State Water Resources Control Board to have a deed restriction/land use restriction and or covenant. For these sites, the Board has determined that the burdened property is not suitable for unrestricted use and that a land use restriction is necessary for the protection of present or future human health, safety, or the environment as a result of the presence of hazardous materials in the soil and/or groundwater.

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Agency: State Water Resources Control Board
Phone Number: 9163415455
Date last updated: 10/31/2017
Date last checked: 10/26/2017
Distance searched: 0.5 miles
Sites:
None Found

Delisted-NPL-US
Delisted NPL Sites
Category: Federal Delisted NPL
Description: The Superfund Enterprise Management System (SEMS). The reports produced by SEMS contain information on the assessment and remediation of current hazardous waste sites. This database contains a listing of Delisted NPL sites. These are facilities that have been removed from the NPL list. The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 9/12/2017
Date last checked: 8/28/2017
Distance searched: 1 mile
Sites:
None Found

DPR-CA
Pesticide Regulation Licenses
Category: ERS Supplemental Govt Sources
Description: This database contains businesses that have been issued a Department of Regulation Pesticide license as reported by the California Department of Pesticide Regulation.
Agency: California Department of Pesticide Regulation
Phone Number: 9164454038
Date last updated: 8/8/2017
Date last checked: 7/19/2017
Distance searched: 0.25 miles
Sites:
None Found

DryCleaners-CA
Dry Cleaner Facilities
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of drycleaners reported by the California Department of Toxic Substances Control.
Agency: California Department of Toxic Substances Control
Phone Number: 8007286942

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Date last updated: 6/27/2017
Date last checked: 6/12/2017
Distance searched: 0.25 miles
Sites:
None Found

EGRID-US
Emissions & Generation Resource Facilities
Category: ERS Supplemental Govt Sources
Description: Emissions & Generation Resource Integrated Database (eGRID) is a comprehensive source of data on the environmental characteristics of almost all electric power generated in the United States.
Agency: United States Environmental Protection Agency
Phone Number: 2023439340
Date last updated: 5/22/2017
Date last checked: 5/11/2017
Distance searched: 0.5 miles
Sites:
None Found

ENF-CA
Enforcement Actions Data
Category: State/Tribal ASTM Other
Description: This database contains facilities that have been assigned an Enforcement Action by the California State Water Resources Control Board (SWRCB). The SWRCB created the Underground Storage Tank (UST) Enforcement Unit to support both the leak prevention and cleanup sides of the UST program by investigating fraud violations of the UST laws an regulations.
Agency: California State Water Resources Control Board, , Office of Enforcement
Phone Number: 9163415272
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

ENF-SMARTS-CA
Storm Water Enforcement Actions
Category: State/Tribal ASTM Other
Description: This data set lists Active and historical enforcement actions that are stored in the Storm Water Multiple Application & Report Tracking System (SMARTS). Enforcement actions are generally issued in response to one or more instances of non-compliance (violations) of a base regulatory measure; enforcement actions can be monetary or non-monetary.
Agency: State Water Resource Control Board
Phone Number: 8667924977
Date last updated: 10/26/2017

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Date last checked: 10/26/2017
Distance searched: 0.25 miles
Sites:
None Found

ENF-Wastewater-CA
Wastewater Enforcement Actions
Category: State/Tribal ASTM Other
Description: This data set lists active and historical enforcement actions records that are stored in the California Integrated Water Quality System (CIWQS). Enforcement actions are generally issued in response to one or more instances of non-compliance (violations) of a base regulatory measure. Enforcement actions can be monetary or non-monetary.
Agency: State Water Resource Control Board
Phone Number: 8667924977
Date last updated: 10/27/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

EPA-Watch-List-US
EPA Watch List
Category: ERS Supplemental Govt Sources
Description: This database contains facilities listed on the Clean Air Act, Clean Water Act, and RCRA Watch List. These reports are now considered archived and will no longer be updated. Being on the Watch List may not mean that the facility has actually violated the law only that an evaluation or investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. The Watch List does not identify which alleged violations of environmental laws may pose the greatest risk to public health or the environment. It is an automated report based on data from the Air Facility System
(AFS), which is used by federal, state and local agencies to track environmental enforcement and compliance information.
Agency: United States Environmental Protection Agency
Phone Number: 2025661667
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

ERNS-US
Emergency Response Notification System
Category: Federal ERNS

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Description: The primary function of the National Response Center is to serve as the sole national point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories. This database contains a listing of discharge locations.
Agency: National Response Center
Phone Number: 8004248802
Date last updated: 10/23/2017
Date last checked: 8/28/2017
Distance searched: 0.063 miles
Sites:
None Found

Eval-Hist-CA
EnviroStor Evaluation History Sites
Category: State/Tribal Voluntary Cleanup Sites
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is Historical Sites. Historical Sites are identified sites from an older database where no site type was identified. Most of these sites have a status of Referred or No Further Action. DTSC is working to clean up this data by identifying an appropriate site type for each Historic Site.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

Eval-Hist-NFA-CA
EnviroStor Database Evaluation History NFA Sites
Category: State/Tribal Voluntary Cleanup Sites
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is Historical Sites that have a status of No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

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FA-HW-CA
Financial Assurance, Hazardous Waste
Category: ERS Supplemental Govt Sources
Description: This database contains Financial Assurance facilities under the Hazardous Waste program reported by the California Department of Toxic Substances Control.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 11/23/2016
Date last checked: 11/16/2016
Distance searched: 0.063 miles
Sites:
None Found

FA-HW-US
Financial Assurance, Hazardous Waste
Category: ERS Supplemental Govt Sources
Description: This database contains Financial Assurance facilities listed under the Hazardous Waste program as reported by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 1/9/2017
Date last checked: 12/15/2016
Distance searched: 0.063 miles
Sites:
None Found

FA-SWF-CA
Financial Assurance, Solid Waste Facilities
Category: ERS Supplemental Govt Sources
Description: This database contains Financial Assurance facilities under the Solid Waste program reported by the California Department of Resources Recycling and Recovery.
Agency: California Department of Resources Recycling and Recovery
Phone Number: 9163416320
Date last updated: 8/22/2016
Date last checked: 10/30/2017
Distance searched: 0.063 miles
Sites:
None Found

FEMA-UST-US
FEMA Underground Storage Tanks
Category: Federal UST
Description: This database contains Federal Emergency Management Agency (FEMA) owned and operated underground storage tanks. The report was published in 2006.

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Agency: United States Environmental Protection Agency
Phone Number: 7036037165
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

FRS-US
Facility Registry Index (FINDS)
Category: ERS Supplemental Govt Sources
Description: The Facility Registry System (FRS) is a centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest.
Agency: United States Environmental Protection Agency
Phone Number: 2022720167
Date last updated: 8/4/2017
Date last checked: 8/28/2017
Distance searched: 0.063 miles
Sites:
None Found

FTTS-ENF-US
FIFRA/TSCA Tracking System (FTTS) Enforcement Actions
Category: Federal ASTM Other
Description: The FIFRA/TSCA Tracking System (FTTS) is a regional system used to track compliance activities such as inspections, case review, enforcement actions taken, samples collected, and pesticide grants and cooperative agreement information. The compliance monitoring and enforcement activities are tracked from the time an inspector conducts (or schedules) an inspection until the time the case is closed or the enforcement action is settled. Specific legal citations include, but are not limited to: Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA).
Agency: United States Environmental Protection Agency
Phone Number: 2025642501
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

FTTS-INSP-US
FIFRA/TSCA Tracking System (FTTS) Inspections
Category: ERS Supplemental Govt Sources

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Description: The FIFRA/TSCA Tracking System (FTTS) is a regional system used to track compliance activities such as inspections, case review, enforcement actions taken, samples collected, and pesticide grants and cooperative agreement information. The compliance monitoring and enforcement activities are tracked from the time an inspector conducts (or schedules) an inspection until the time the case is closed or the enforcement action is settled. Specific legal citations include, but are not limited to: Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA).
Agency: United States Environmental Protection Agency
Phone Number: 2025642501
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

FUDS-US
Formerly Used Defense Sites
Category: ERS Supplemental Govt Sources
Description: The Department of Defense (DoD) is responsible for environmental restoration of properties that were formerly owned by, leased to or otherwise possessed by the United States and under the jurisdiction of the Secretary of Defense. Such properties are known as Formerly Used Defense Sites (FUDS). The Army is the executive agent for the program and the U.S. Army Corps of Engineers manages and directs the program's administration. The scope and magnitude of the FUDS program are significant, with more than 9,900 properties identified for potential inclusion in the program. Information about the origin and extent of contamination, land transfer issues, past and present property ownership, and program policies must be evaluated before DoD considers a property eligible for Defense Environment Restoration Account (DERA) funding under the FUDS program. Environmental cleanup procedures at FUDS are similar to those at active DoD installations.
Agency: Department of Defense
Phone Number: 2025284285
Date last updated: 1/16/2017
Date last checked: 1/9/2017
Distance searched: 1 mile
Sites:
None Found

FUSRAP-US
Formerly Utilized Sites Remedial Action Program Sites
Category: ERS Supplemental Govt Sources
Description: The Formerly Utilized Sites Remedial Action Program (FUSRAP) was initiated in 1974 to identify, investigate and clean up or control sites through the United States that had became contaminated from the nation’s early atomic weapons and energy programs during the 1940s, 1950s and 1960s. Activities were performed by the Manhattan Engineer District or under the Atomic Energy Commission, prior to the Department of Energy being formed.
Agency: Department of Energy, Office of Legacy Management

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Phone Number: 2025863559
Date last updated: 3/8/2017
Date last checked: 2/23/2017
Distance searched: 0.25 miles
Sites:
None Found

Haulers-CA
Registered Waste Tire Haulers Listing
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of listing of registered waste tire haulers.
Agency: California Department of Resources Recycling and Recovery
Phone Number: 9163416422
Date last updated: 7/5/2017
Date last checked: 6/22/2017
Distance searched: 0.063 miles
Sites:
None Found

HazWaste-CA
Hazardous Waste Facilities
Category: State/Tribal ASTM Other
Description: This database contains a listing of Hazardous Waste Sites tracked by DTSC. The majority of the sites are no longer in operation.
Agency: California Department of Toxic Substance Control
Phone Number: 9163233400
Date last updated: 11/1/2017
Date last checked: 10/26/2017
Distance searched: 0.25 miles
Sites:
None Found

Hist-AFS2-US
Air Facility System for Clean Air Act stationary sources
Category: ERS Supplemental Govt Sources
Description: AFS contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners (automobiles and other mobile air pollution sources are tracked by a different AIRS subsystem (AMS).
Agency: United States Environmental Protection Agency
Phone Number: 2025645962
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles

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Sites:
None Found

Hist-AFS-US
Air Facility System for Clean Air Act stationary sources
Category: ERS Supplemental Govt Sources
Description: AFS contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners (automobiles and other mobile air pollution sources are tracked by a different AIRS subsystem (AMS).
Agency: United States Environmental Protection Agency
Phone Number: 2025645962
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Agriculture
Ranches/Farms, Livestock/Agriculture
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Ranches, Farms, Livestock, and/or Agriculture.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-AST-CA
Historical Aboveground Storage Tanks
Category: ERS Supplemental Govt Sources
Description: This database contains aboveground storage tanks. This is a historical database compiled by the State Water Resource Control Board in 1998.
Agency: State Water Resource Controls Board
Phone Number: 9162274364
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

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Hist-Auto Dealers
Auto and Truck Dealers
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Auto Dealers.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Auto Repair
Automotive Repair
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Auto Repair and Tire Dealers.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-AWS-CA
Annual Workplan Sites
Category: ERS Supplemental Govt Sources
Description: This database is provided by the Cal. Environmental Protection Agency, Dept. of Toxic Substances Control. Annual Work Plan (AWP) sites and sites where Preliminary Endangerment Assessments are a high priority are included.
Agency: California Environmental Protection Agency, Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

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Hist-CA
Previously Listed California Sites
Category: ERS Supplemental Govt Sources
Description: ERS has compiled records that have been previously listed in other agency databases. When ERS updates an agency database, if there is a record that was in the older version but the record is not found in the newer version, it is put into this database. The site may have been completely removed, or there was a significant change in the record such as Name, ID, or Address. The information from the old listing is preserved in this database along with which database it was originally in, It is also possible that it was moved from one database to another such as a LUST Open site receiving closure and now being listed in the LUST Closed database.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-CalFID-CA
Facility Inventory Database
Category: ERS Supplemental Govt Sources
Description: This database lists facilities included in the Facility Inventory Database as reported by the Environmental Protection Agency, Department of Toxic Substances Control in 1998.
Agency: California Department of Toxic and Substance Control.
Phone Number: 9163233400
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-CALSITES-CA
Calsites Database
Category: ERS Supplemental Govt Sources
Description: The CalSites database includes both known and potential sites. Two- thirds of these sites have been classified, based on available information, as needing "No Further Action" (NFA) by the Department of Toxic Substances Control. The remaining sites are in various stages of review and remediation to determine if a problem exists at the site. Several hundred sites have been remediated and are considered certified. Some of these sites may be in long term operation and maintenance.
Agency: Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:

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None Found

Hist-CERCLIS-NFRAP-US
CERCLIS-NFRAP
Category: ERS Supplemental Govt Sources
Description: This database contains CERCLIS sites that are classified as No Further Action Remedial Action Planned as reported in 1998.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-CERCLIS-US
CERCLIS Sites
Category: ERS Supplemental Govt Sources
Description: This database contains CERCLIS sites as reported in 1998.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Chemical Manufacturing
Manufacturing and Distribution of Chemicals, Gases, and/or Solids
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Manufacturing and Distribution of Chemicals, Gases, and/or Solids.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Chemical-Storage

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Chemical/Hazardous Use Storage
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes chemical storage facilities.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-City-UST-CA
Underground Storage Tanks
Category: ERS Supplemental Govt Sources
Description: This database contains UST listings reported by City Agencies in 1998. The corresponding agency name and database name will be listed in the details section of the occurrence.
Agency: Local City Agencies
Phone Number: 7146698096
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Cleaners
Laundry, Cleaners, and Dry Cleaning Services
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites, such as: Laundry, Cleaners, and Dry Cleaning Services.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Controls-CA
Previous Restricted Use Sites
Category: State/Tribal Inst/Eng Controls

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Description: This database contains a listing of previous (historical) restricted use sites where DTSC placed limits or requirements on future use of the property.
Agency: Department of Toxic Substances Control
Phone Number: 9162553745
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-Convenience
Convenience Store with Possible Gas
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes convenience stores with possible gas use.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Cort-CA
Historical Cortese list
Category: State/Tribal ASTM Other
Description: This database contains historical Hazardous Waste and Substances Site (Cortese) listings reported by the California State Water Resource Control Board.
Agency: California State Water Resource Control Board.
Phone Number: 8007286942
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Deed-CA
Deed Restriction Properties
Category: ERS Supplemental Govt Sources
Description: These are voluntary deed restriction agreements with owners of property who propose building residences, schools, hospitals, or day care centers on property that is "on or within 2,000 feet of a significant disposal of hazardous waste".
Agency: Department of Health Services-Land Use and Air Assessment

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Phone Number: 9163233376
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Disposal-Recycle
Hazardous Disposal/Recycle and Dumps/Waste
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes hazardous disposal facilities.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-DTG-CA
Depth to Groundwater
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of Depth to Groundwater reported by the Los Angeles region State Water Resources Control Board.
Agency: California State Water Resources Control Board
Phone Number: 2135766600
Date last updated: 2/9/2016
Date last checked: 1/21/2016
Distance searched: 0.25 miles
Sites:
None Found

Hist-Dumps-US
Dumps Inventory of 1985
Category: Federal Solid Waste
Description: This database contains Dumps as reported on the Inventory of Open Dumps from 1985. This report was published by the Office of Solid Waste, EPA.
Agency: Environmental Protection Agency
Phone Number: 2025660200
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles

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Sites:
None Found

Hist-ERNS-US
Emergency Response Notification System (ERNS)
Category: ERS Supplemental Govt Sources
Description: The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the US Coast Guard, the National Response Center and the Department of transportation. A search of the database records for the period October 1986 through January 1998 revealed information regarding reported spills of oil or hazardous substances in the stated area.
Agency: National Response Center
Phone Number: 8004248802
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-FIFRA-US
Case Administration Data from National Compliance Database (Federal Insecticide, Fungicide, and Rodenticide Act)
Category: ERS Supplemental Govt Sources
Description: This database is no longer maintained by EPA since 2006. The system tracked compliance monitoring and enforcement activities from the time an inspector conducts an inspection until the inspector closes the case or settles any resulting enforcement action(s). EPA now has the ICS database to track this information.
Agency: U.S. Environmental Protection Agency
Phone Number: 2025642501
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-FINDS-US
Facility Index System
Category: ERS Supplemental Govt Sources
Description: The Facility Index System (FINDS) is a compilation of any property or site which the EPA has investigated, reviewed or been made aware of in connection with its various regulatory programs. The data is from 1998.
Agency: United States Environmental Protection Agency
Phone Number: 2022720167

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Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Food-Processors
Food Processing Manufacturers
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes food processors.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Gun-Ranges
Gun Ranges/Clubs
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes gun ranges/clubs.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-HWS-CA
Cortese List-Hazardous Waste Substance Site List
Category: ERS Supplemental Govt Sources
Description: This database (CORTESE) is based on input from the following: (1)CALSITES-Department of

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Toxic Substances Control, Abandoned Sites Program Information Systems; (2)SARA Title III Section III Toxic Chemicals Release Inventory for 1987, 1988, 1989, and 1990; (3)FINDS; (4)HWIS-Department of Toxic Substances Control, Hazardous Waste Information System. Vista has not included one time generator facilities from Cortese in our database.; (5)SWRCB-State Water Resources Control Board;(6)SWIS-Integrated Waste Management Control Board (solid waste facilities); (7)AGT25-Air Resources
Board, dischargers of greater than 25 tons of criteria pollutants to the air; (8)A1025-Air Resources Board, dischargers of greater than 10 and less than 25 tons of criteria pollutants to the air;(9)LTANK-SWRCB Leaking Underground Storage Tanks; (10)UTANK-SWRCB Underground tanks reported to the SWEEPS systems; (11)IUR-Inventory Update Rule (Chemical Manufacturers);
(12)WB-LF- Waste Board - Leaking Facility, site has known migration; (13)WDSE-Waste Discharge System - Enforcement Action; (14)DTSCD-Department of Toxic Substance Control Docket.
Agency: Office of Environmental Protection, Office of Hazardous Material
Phone Number: 9164456532
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-LUSTIS-CA
Lust Information System (LUSTIS)
Category: ERS Supplemental Govt Sources
Description: This database contains sites reported on the Lust Information System in 1998.
Agency: California Environmental Protection Agency
Phone Number: 9164456532
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Machine Shop
Machine Shops, Welding, Machine Repair
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites, such as: Machine shops, welding shops and machine repair.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:

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None Found

Hist-Manufacturing
Historic Sources US: Manufacturing
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes manufacturing sites.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Metal Plating
Metal Plating
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes metal plating sites.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Mining
Mining Operations
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Mining facilities.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

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HIST-MLTS-US
Material Licensing Tracking System
Category: ERS Supplemental Govt Sources
Description: This database contains facilities listed on the Material Licensing Tracking system that possess or use radioactive materials as reported by the U.S. Nuclear Regulatory Commission. In late 2012, the agency changed from MLTS to WBL system and no longer keep track of certain information that was available in the old MLTS system.
Agency: U.S. Nuclear Regulatory Commission
Phone Number: 3014157169
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Mortuaries
Crematories/Mortuaries
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Mortuaries and Crematories.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

HIST-MTBE-CA
Historical Sites With MTBE (Methyl Tertiary-Butyl Ether) Contamination
Category: ERS Supplemental Govt Sources
Description: This database contains Historical Sites With MTBE (Methyl Tertiary-Butyl Ether) Contamination reported by the California Regional Water Quality Control Boards.
Agency: California Environmental Protection Agency-California Regional Water Quality Control Boards
Phone Number: 9163415254
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-NPL-US

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National Priority List
Category: ERS Supplemental Govt Sources
Description: This database contains NPL sites as reported in 1998.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Oil-Gas
Oil and Gas Well Related Facilities
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Oil and Gas Well related facilities.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-OilGas-Refiners
Oil/Gas Refiners/Manufacturers/Plants
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Oil and Gas Refiners and/or plants.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Orange-County-LF-CA
Orange County Landfills
Category: ERS Supplemental Govt Sources
Description: This database contains county landfills reported in 1998.
Agency: Orange County Health Care Agency

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Phone Number: 7148343446
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Historical-CA
Historical Sites
Category: ERS Supplemental Govt Sources
Description: Identifies sites from an older database where no site type was identified. Most of these sites have a status of Referred or No Further Action. DTSC is working to clean-up this data by identifying an appropriate site type for each "Historic" site.
Agency: California Department of Toxic Substance Control
Phone Number: 8777869427
Date last updated: 4/7/2017
Date last checked: 3/28/2017
Distance searched: 0.5 miles
Sites:
None Found

Hist-Other
Environmental Facilities
Category: ERS Exclusive Historic Sources
Description: City Directory data of listings that fall under the categories of Lumber, Machinery dealers, and machnists.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Paint-Stores
Paint Stores
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes paint stores.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A

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Distance searched: 0.063 miles
Sites:
None Found

Hist-Petroleum
Petroleum Refining/ Manufacturing/ Chemicals
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Petroleum Refining, Manufacturing, and/or processing Chemicals.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Post-Offices
Post Offices
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes post offices.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Printers
Printers and Publishers
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Printers and Publishers.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles

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Sites:
None Found

Hist-Prop65-CA
Historical Prop 65 Sites
Category: ERS Supplemental Govt Sources
Description: This database contains historical sites that have a Prop 65 form on their file as reported by the Ventura County Environmental Health.
Agency: Ventura County Environmental Health
Phone Number: 8056542815
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

HIST-R4-CA
Historical sites
Category: State/Tribal ASTM Other
Description: This database contains a listing of Historical sites in Los Angeles Region reported by Los Angeles Regional Water Quality Control Board.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-RCRIS-US
EPA's Resource Conservation and Recovery Act
Category: ERS Supplemental Govt Sources
Description: This database contains RCRA facilities as reported by the EPA in 1998. It includes, small, large, and conditionally exempt generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Regional-LUST-CA

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Leaking Underground Storage Tanks
Category: ERS Supplemental Govt Sources
Description: This database contains LUST listings reported by Regional Districts of the Water Quality Control Board in 1998. The corresponding agency name and database name will be listed in the details section of the occurrence.
Agency: Regional Water Quality Control Board
Phone Number: 9163415808
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Regional-Other-CA
Toxic Lists, Site Mitigation, and Groundwater Cleanup Program
Category: ERS Supplemental Govt Sources
Description: This database contains environmental listings reported by County Offices in 1998. The corresponding agency name and database name will be listed in the details section of the occurrence.
Agency: Local County Agencies
Phone Number: 7146698096
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Regional-SLIC-CA
List of Spills and Leak Sites
Category: ERS Supplemental Govt Sources
Description: This database contains SLIC listings reported by Regional Districts of the Water Quality Control Board in 1998. The corresponding agency name and database name will be listed in the details section of the occurrence.
Agency: Regional Water Quality Control Board
Phone Number: 9163415808
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Regional-Spills-CA
Industrial Cleanup Sites
Category: ERS Supplemental Govt Sources

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Description: This database contains the industrial cleanup sites reported in 1998 by the Orange County Health Care Agency.
Agency: Orange County Health Care Agency
Phone Number: 7148343446
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Regional-SWLF-CA
County Landfills and Transfer Stations
Category: ERS Supplemental Govt Sources
Description: This database contains county landfills and transfer stations as reported in 1998 by the Public Health Investigations, Hazardous Material Control Program.
Agency: Public Health Investigations, Hazardous Material Control Program
Phone Number: 2138814151
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Regional-UST-CA
Underground Storage Tanks
Category: ERS Supplemental Govt Sources
Description: This database contains UST listings reported by Regional Districts of the Water Quality Control Board in 1998. The corresponding agency name and database name will be listed in the details section of the occurrence.
Agency: Regional Water Quality Control Board
Phone Number: 9163415808
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Rental
Rental Equipment & Yards
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes rental equipment facilities and yards.
Agency: Environmental Record Search (ERS)

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Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-RV-Dealers
Trailer and Recreational Vehicle Dealers
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Trailer and Recreational Vehicle Dealers.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Salvage
Vehicle Salvage Yards or Wreckers
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Vehicle Salvage Yards or Wreckers.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-SCL-CA
California Cerclis Sites
Category: ERS Supplemental Govt Sources
Description: This database contains California CERCLIS sites as reported in 1998.
Agency: U.S. Environmental Protection Agency, Region 9
Phone Number: 4159478000
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles

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Sites:
None Found

Hist-Service Stations
Service Stations/Vehicle Fueling
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Service Stations/Vehicle Fueling Stations.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

HIST-SLIC-CV-CLOSED-CA
Central Valley Spills and Leak Sites
Category: Emergency Release Reports
Description: This database contains a List of Spill and Leak Sites (SL) and Department of Defense (DOD) and Department of Energy (DOE) cleanup cases in the central portion of the Central Valley Region as reported by the Central Valley Regional Quality Board. This historical database has not been updated since 2005 and lists sites considered closed at that time.
Agency: Central Valley Regional Quality Board
Phone Number: 9164643291
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

HIST-SLIC-CV-OPEN-CA
Central Valley Spills and Leak Sites
Category: Emergency Release Reports
Description: This database contains a List of Spill and Leak Sites (SL) and Department of Defense (DOD) and Department of Energy (DOE) cleanup cases in the central portion of the Central Valley Region as reported by the Central Valley Regional Quality Board. This historical database has not been updated since 2005 and lists sites considered open at that time.
Agency: Central Valley Regional Quality Board
Phone Number: 9164643291
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles

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Sites:
None Found

Hist-Steel-Metals
Steel Mills/Manufacturers/Foundries/Smelters
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes steel metal manufacturers, foundries, and smelters.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-SWF-CA
Previous listed Solid Waste Facilities
Category: State/Tribal Landfill/Solid Waste
Description: This database contains a listing of previously listed active sites as reported by the California Department of Toxic and Substance Control. This is a historic database that is no longer updated. Therefore; some sites may no longer be active.
Agency: California Department of Toxic and Substance Control
Phone Number: 9163233400
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-SWIS-CA
Solid Waste Information System (SWIS)
Category: ERS Supplemental Govt Sources
Description: The California Solid Waste Information System (SWIS) database consists solid waste disposal facilities and transfer stations. This database is from 1998.
Agency: Integrated Waste Management Board
Phone Number: 9162554021
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

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Hist-Textile
Textile Mills/Manufacturers
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes textile mill manufacturers.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-ToxicPits-CA
Toxic Pits Cleanup Facilities
Category: ERS Supplemental Govt Sources
Description: This database contains toxic pit sites reported in 1998.
Agency: Water Quality Control Board, Division of Loans Grants
Phone Number: 9162274396
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Transportation
Transportation Facilities
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Airports and other facilities that may handle hazardous materials and petroleum products.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-TRIS-US
Toxic Release Inventory System

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Category: ERS Supplemental Govt Sources
Description: This database contains facilities who report to the Toxic Release Inventory System as required by the EPA. This reporting is from 1998.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Trucking
Trucking, Shipping, Delivery, and/or Storage
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes sites such as: Trucking, Shipping, and/or Delivery Storage.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-US
Previously Listed Federal Sites
Category: ERS Supplemental Govt Sources
Description: ERS has compiled records that have been previously listed in other agency databases. When ERS updates an agency database, if there is a record that was in the older version but the record is not found in the newer version, it is put into this database. The site may have been completely removed, or there was a significant change in the record such as Name, ID, or Address. The information from the old listing is preserved in this database along with which database it was originally in, It is also possible that it was moved from one database to another such as a LUST Open site receiving closure and now being listed in the LUST Closed database.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-US-EC

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Historic Engineering Controls Sites (aka US EC, Engineering Controls, Land Use Controls)
Category: Federal Institutional/Engineering Controls
Description: Engineering Controls (EC) consist of engineering measures (e.g, caps, treatment systems, etc.) designed to minimize the potential for human exposure to contamination by either limiting direct contact with contaminated areas or controlling migration of contaminants through environmental media. This database contains listings of sites with Engineering Controls placed on them. This data was obtained from a historical source located on the EPA's website. It is no longer available or updated.
Agency: Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-USGS-WaterWells-CA
Ground Water Site Inventory for California
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of wells, springs, test holes, tunnels, drains, and excavations in California.
Agency: United States Geological Survey, Water Resources Program
Phone Number: 9162783000
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-US-IC
Sites with Institutional Controls (aka US IC, Institutional Controls, Land Use Controls)
Category: Federal Institutional/Engineering Controls
Description: Institutional controls (IC) are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. This database contains listings of sites with Institutional Controls placed on them. This data was obtained from a historical source located on the EPA's website. It is no longer available or updated.
Agency: Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-UST-CA

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HISTORICAL HAZARDOUS SUBSTANCE STORAGE INFORMATION (aka Historical Underground Storage Tanks)
Category: State/Tribal UST
Description: The California State Water Resources Control Board (RWQCB) provides this archived historical database of storage containers. This database contains information collected in the 1980s from facilities that stored hazardous substances. The information was originally collected on paper forms and was later transferred to microfiche. The database is no longer updated.
Agency: California State Water Resources Control Board
Phone Number: 8664801028
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-UST-Cleanup-CA
Historic UST Cases Recommended for Closure under UST Cleanup Fund 5 Year Review (aka UST Cleanup Fund Cases)
Category: State/Tribal LUST
Description: This database contains leaking UST cases that have been recommended for closure under the State Water Board's authority to perform reviews of claims to the UST Cleanup Fund that have been open for 5 or more years (5 Year Review). This policy is no longer in effect as of 2012 and these listings will no longer be updated.
Agency: California State Water Resource Control Board
Phone Number: 9163415808
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-USTReg-CA
Underground Storage Tank Registrations Database
Category: ERS Supplemental Govt Sources
Description: This database contains UST facilities listed on the Registrations Database from 1998.
Agency: State Water Resources Control Board
Phone Number: 9162274337
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Hist-Vehicle-Parts

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Vehicle Parts
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes Vehicle Parts Dealers.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-Vehicle-Washing
Vehicle/Truck Washing Facilities
Category: ERS Exclusive Historic Sources
Description: ERS has compiled proprietary lists of MILLIONS of records dating back to the 1800's that have shown up in historic resources and based on their classification, may have used hazardous materials or petroleum products. This listing includes vehicle washing facilities.
Agency: Environmental Record Search (ERS)
Phone Number: 8003772430
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-WaterWells-US
Public Community Water Supply/Well Head Protection Database
Category: ERS Supplemental Govt Sources
Description: This database contains the public community water supply wells as reported by the Geological Survey in 1998.
Agency: Geological Survey
Phone Number: 6092921185
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

Hist-WIP-Active-CA
Well Investigation Program Case List, Active Sites (aka WIP)
Category: State/Tribal ASTM Other

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Description: The Well Investigation Program was developed to locate, assess and remediate sources of solvent contamination impacting drinking water wells. WIP is no longer in use. Existing WIP cases that are still being assessed or remediated are now overseen under the SLIC program. These records were active when WIP was still in use. This database is no longer updated.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-WIP-Backlog-CA
Well Investigation Program Case List, Backlog Sites (aka WIP)
Category: State/Tribal ASTM Other
Description: The Well Investigation Program was developed to locate, assess and remediate sources of solvent contamination impacting drinking water wells. WIP is no longer in use. Existing WIP cases that are still being assessed or remediated are now overseen under the SLIC program. When WIP was in use, the records on this database had not been assigned to a staff member and/or had very low priority in terms of contamination. This database is no longer updated.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

Hist-WIP-Historical-CA
Well Investigation Program Case List, Historical Sites (aka WIP)
Category: State/Tribal ASTM Other
Description: The Well Investigation Program was developed to locate, assess and remediate sources of solvent contamination impacting drinking water wells. WIP is no longer in use. Existing WIP cases that are still being assessed or remediated are now overseen under the SLIC program. The records in this database had received a No Further Action Letter while WIP was still in use. This database is no longer updated.
Agency: Los Angeles Regional Water Quality Control Board
Phone Number: 2135766725
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.5 miles
Sites:
None Found

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Hist-WMUDS-CA
Waste Management Unit Database System
Category: ERS Supplemental Govt Sources
Description: This database from 1998 contains information from: Facility, Waste Management Unit, SWAT Program and Report Summary Information, Chapter 15 (formerly Subchapter 15), TPCA and RCRA Program Information, Closure Information; also some information from the WDS (Waste Discharge System).
Agency: State Water Resources Control Board
Phone Number: 9168920323
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

HMIS-US
Hazardous Materials Information System
Category: Federal Emergency Release Reports
Description: Data includes spills, releases, or other incidents involving hazardous materials in commerce during the course of transportation. All modes of transportation are included except pipeline and bulk marine transportation. Data represent a census of all incidents reportable to the U.S. Department of Transportation This database contains a listing of spills. (DOT). U.S. federal regulations require all spills meeting the following criteria to be reported, in writing, to DOT's Office of Hazardous Materials Safety.
Agency: US Department of Transportation Pipeline and Hazardous Materials Safety Administration
Phone Number: 2023664433
Date last updated: 9/21/2017
Date last checked: 8/28/2017
Distance searched: 0.063 miles
Sites:
None Found

HWIS-CA
Hazardous Waste Information Summary
Category: State/Tribal RCRA Equivalent
Description: The Hazardous Waste Summary Report (formerly the Tanner Report) is prepared from data extracted from the copies of hazardous waste manifests received each year by DTSC. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments. This database contains a listing of facilities extracted from the data.
Agency: California Department of Toxic Substances Control
Phone Number: 9162553745
Date last updated: 10/27/2017
Date last checked: 10/27/2017
Distance searched: 0.063 miles
Sites:
None Found

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HWMP-Controls-CA
Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction
Category: State/Tribal Inst/Eng Controls
Description: The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.
Agency: California Department of Toxic Substances Control
Phone Number: 9162553745
Date last updated: 10/26/2017
Date last checked: 10/26/2017
Distance searched: 0.5 miles
Sites:
None Found

HWT-CA
Hazardous Waste Transporters
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of Registered Hazardous Waste Transporters in California defined by the Department of Toxic Substance Control. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number. The database current active, inactive, and closed facilities.
Agency: California Department of Toxic of Substance Control
Phone Number: 9164407145
Date last updated: 8/7/2017
Date last checked: 7/20/2017
Distance searched: 0.25 miles
Sites:
None Found

ICE-CA
Inspection, Compliance, and Enforcement
Category: State/Tribal ASTM Other
Description: This database contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor. This data is periodically uploaded to US EPA's RCRAInfo data system.
Agency: California State Water Resources Control Board, Office of Enforcement
Phone Number: 9163415272
Date last updated: 10/31/2017
Date last checked: 10/26/2017
Distance searched: 0.25 miles

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Sites:
None Found

ICIS-Air-US
Integrated Compliance Information System for Air
Category: ERS Supplemental Govt Sources
Description: The Integrated Compliance Information System for Air (ICIS-Air) data exchange allows all State, Local, and Tribal Air agencies providing air stationary source enforcement and compliance data to submit their data to EPA via the Exchange Network.
Agency: United States Environmental Protection Agency
Phone Number: 2025645962
Date last updated: 2/3/2017
Date last checked: 12/20/2016
Distance searched: 0.063 miles
Sites:
None Found

ICIS-FEC-US
Integrated Compliance Information System for Federal Enforcement Data
Category: ERS Supplemental Govt Sources
Description: The Integrated Compliance Information System (ICIS) tracks all formal administrative and judicial enforcement actions taken by the U.S. EPA and is used as the system of record to provide official enforcement data.
Agency: United States Environmental Protection Agency
Phone Number: 2025646962
Date last updated: 2/3/2017
Date last checked: 1/17/2017
Distance searched: 0.063 miles
Sites:
None Found

ICIS-NPDES-US
National Pollutant Discharge Elimination System (NPDES)
Category: ERS Supplemental Govt Sources
Description: The National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. This database contains a listing of permit holders.
Agency: United States Environmental Protection Agency
Phone Number: 2022720167
Date last updated: 10/27/2017
Date last checked: 8/28/2017
Distance searched: 0.063 miles
Sites:
None Found

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LA-LF-CA
Los Angeles County Landfills
Category: State/Tribal Solid Waste
Description: This database contains the property boundaries of Los Angeles county landfills and solid waste sites.
Agency: Department of Public Works
Phone Number: 8882532652
Date last updated: 7/19/2017
Date last checked: 7/19/2017
Distance searched: 1 mile
Sites:
None Found

Land-Disposal-CA
Geotracker - Land Disposal Sites (aka Landfills, LDS)
Category: State/Tribal Landfill/Solid Waste
Description: GeoTracker is the California State Water Resources Control Board's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. The system is used by the State Board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks. This database contains a listing of Land Disposal Sites (landfills).
Agency: California Regional Water Quality Control Board
Phone Number: 8664801028
Date last updated: 11/1/2017
Date last checked: 10/26/2017
Distance searched: 0.5 miles
Sites:
None Found

LA-Waste-Haulers-CA
Waste Haulers
Category: ERS Supplemental Govt Sources
Description: This database contains waste haulers as reported by the Los Angeles Department of Public Works.
Agency: Department of Public Works
Phone Number: 8882532652
Date last updated: 8/8/2017
Date last checked: 7/20/2017
Distance searched: 0.063 miles
Sites:
None Found

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Lead-Smelter-2-US
Lead Smelter Sites
Category: ERS Supplemental Govt Sources
Description: This database contains 464 sites that were reported as potential lead smelters sites in research conducted by the EPA Superfund Program and other sources. The sites are listed on the 2007 published report by the EPA Superfund Program.
Agency: United States Environmental Protection Agency
Phone Number: 7034129810
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Lead-US
Lead Smelter Sites
Category: ERS Supplemental Govt Sources
Description: This database contains lead smelter sites reported by the Environmental Protection Agency. This database is provided by the Superfund Enterprise Management System (SEMS).
Agency: United States Environmental Protection Agency
Phone Number: 2025645962
Date last updated: 1/13/2017
Date last checked: 1/10/2017
Distance searched: 0.25 miles
Sites:
None Found

Liens-CA
Environmental Liens
Category: State/Tribal Inst/Eng Controls
Description: This database identifies sites that have liens reported by the California Department of Toxic Substances Control. It is a policy of the DTSC to utilize statutory liens pursuant to Health & Safety Code section 25365.6 as a tool to secure unreimbursed response costs incurred by the Department in conducting or overseeing response actions pursuant to the Hazardous Substance Account Act.
Agency: California Department of Toxic Substances Control.
Phone Number: 9163233400
Date last updated: 11/1/2017
Date last checked: 10/27/2017
Distance searched: 0.063 miles
Sites:
None Found

LIENS-US

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Superfund Liens
Category: Federal Institutional/Engineering Controls
Description: Section 107(f) of the Superfund Amendments and Reauthorization Act of 1986 (SARA), adds a new section 107(l) to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which provides for the establishment of a federal lien in favor of the United States upon property which is the subject of a removal or remedial action. This database contains sites that have had Federal Liens filed on them as reported by the EPA.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 7/28/2017
Date last checked: 7/13/2017
Distance searched: 0.063 miles
Sites:
None Found

LMOP-US
Landfill Methane Outreach Program
Category: ERS Supplemental Govt Sources
Description: The U.S. Environmental Protection Agency's Landfill Methane Outreach Program (LMOP) is a voluntary assistance program that helps to reduce methane emissions from landfills by encouraging the recovery and beneficial use of landfill gas (LFG) as a renewable energy resource.
Agency: Environmental Protection Agency
Phone Number: 2025647873
Date last updated: 9/13/2017
Date last checked: 8/25/2017
Distance searched: 0.5 miles
Sites:
None Found

LUST-Closed-CA
Geotracker - Leaking Underground Storage Tanks, Closed Cases
Category: State/Tribal LUST
Description: GeoTracker is the California State Water Resources Control Board's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. The system is used by the State Board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks. This database contains a subset of sites that have received closure and now have a status of Case Closed.
Agency: California State Water Resources Control Board
Phone Number: 8664801028
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

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LUST-Open-CA
Geotracker - Leaking Underground Storage Tanks, Open Cases
Category: State/Tribal LUST
Description: GeoTracker is the California State Water Resources Control Board's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. The system is used by the State Board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks. This database contains a subset of sites that have not yet been cleaned up and have a status of Case Open.
Agency: California State Water Resources Control Board
Phone Number: 8664801028
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

Manifest2-RI
Hazardous Waste Manifest
Category: State/Tribal RCRA Equivalent
Description: The Rhode Island Department of Environmental Management, Hazardous Waste Manifest System lists sites from all over the country, not just Rhode Island. To be thorough, ERS has searched the data subset that includes listings on or near the subject site that are listed in the Rhode Island Department of Environmental Management, Hazardous Waste Manifest System.
Agency: Rhode Island Department of Environmental Management
Phone Number: 4012222797
Date last updated: 12/23/2016
Date last checked: 12/23/2016
Distance searched: 0.063 miles
Sites:
None Found

MethaneLF-CA
Methane Producing Landfills
Category: State/Tribal Other
Description: This database represents known disposal sites in Los Angeles County that may produce and emanate methane gas. The database contains disposal sites within Los Angeles County that once accepted degradable refuse material.
Agency: Los Angeles County GIS Portal
Phone Number: 6264585189
Date last updated: 7/11/2017
Date last checked: 7/11/2017
Distance searched: 1 mile

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Sites:
None Found

Military-Active-CA
EnviroStor Database Military Active Sites (aka MCS)
Category: State/Tribal Voluntary Cleanup Sites
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is Military sites including open and closed bases and Former Used Defense Sites with a status of Active. Active sites are those with confirmed or unconfirmed releases and where DTSC is involved in investigation and/or remediation, either in a lead or support capacity.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 1 mile
Sites:
None Found

Military-Bases-US
Military Base Boundaries
Category: ERS Supplemental Govt Sources
Description: United States Military Installations is a polygon theme representing the boundaries and location information for important military installations in the United States and Puerto Rico. The database includes records for 405 military installations.
Agency: Research and Innovative Technology Administration's Bureau of Transportation Statistics
Phone Number: 2023663828
Date last updated: 8/9/2016
Date last checked: 7/22/2016
Distance searched: 1 mile
Sites:
None Found

Military-NFA-CA
EnviroStor Database Military Active Sites (aka MCS)
Category: State/Tribal Voluntary Cleanup Sites
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is Military sites including open and closed bases and Former Used Defense Sites with a status of No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427

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Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

Military-Other-CA
EnviroStor Database Military Active Sites (aka MCS)
Category: State/Tribal Voluntary Cleanup Sites
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is Military sites including open and closed bases and Former Used Defense Sites that do not have a status of Active or No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 1 mile
Sites:
None Found

Mines2-CA
California Mines
Category: ERS Supplemental Govt Sources
Description: This database contains Mines reported by the California Department of Conservation. These include, active, closed, exempt, newly permitted, and idle.
Agency: California Department of Conservation
Phone Number: 9163239198
Date last updated: 3/31/2017
Date last checked: 3/27/2017
Distance searched: 0.063 miles
Sites:
None Found

Mines-CA
Death Valley Mines
Category: ERS Supplemental Govt Sources
Description: This database contains death valley mines as reported by the California Department of Conservation.
Agency: California Department of Conservation
Phone Number: 9163239198
Date last updated: Historical Database
Date last checked: N/A

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Distance searched: 0.063 miles
Sites:
None Found

Mines-CDMG-CA
California Division of Mines and Geology
Category: ERS Supplemental Govt Sources
Description: The California Division of Mines and Geology has compiled summary data concerning 2700 mining operations and known related water-quality problems in California. The listing includes all mines known to have exceeded $100,000 in value of production and those lesser mines which may have a high potential for polluting water resources.
Agency: California Division of Mines and Geology
Phone Number: 9163239198
Date last updated: 8/31/2017
Date last checked: 8/3/2017
Distance searched: 0.063 miles
Sites:
None Found

MINES-US
Mines Master Index File
Category: ERS Supplemental Govt Sources
Description: The Master Index file contains mine identification numbers issued for mines active or opened since 1971.
Agency: United States Department of Labor
Phone Number: 8777786055
Date last updated: 2/3/2017
Date last checked: 1/9/2017
Distance searched: 0.063 miles
Sites:
None Found

MLTS-US
Material Licensing Tracking System
Category: ERS Supplemental Govt Sources
Description: This database contains facilities listed on the Material Licensing Tracking system that possess or use radioactive materials as reported by the U.S. Nuclear Regulatory Commission.
Agency: U.S. Nuclear Regulatory Commission
Phone Number: 3014157169
Date last updated: 11/2/2017
Date last checked: 11/2/2017
Distance searched: 0.063 miles
Sites:
None Found

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Mortgage-CA
Cal Mortgage Facilities
Category: ERS Supplemental Govt Sources
Description: Cal-Mortgage: Under a Memorandum of Understanding with the Cal-Mortgage Loan Insurance Division (Cal-Mortgage) of the Office of Statewide Health Planning and Development, DTSC reviews environmental documents for sites applying for their guaranteed loan insurance program for the construction, improvement and expansion of health care facilities. The loan applicants are either public entities or non-profit groups. The environmental review is done as part of the real estate due diligence process and the properties are not expected to have had hazardous substances releases.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

MRDS-US
Mineral Resources Data System (MRDS)
Category: ERS Supplemental Govt Sources
Description: MRDS is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references.
Agency: U.S. Geologic Survey
Phone Number: 8882758747
Date last updated: 8/30/2017
Date last checked: 8/30/2017
Distance searched: 0.25 miles
Sites:
None Found

MWMP-CA
Medical Waste Management Program
Category: ERS Supplemental Govt Sources
Description: This database contains permitted transfer and treatment facilities reported by the California Department of Public Health.
Agency: California Department of Public Health
Phone Number: 9164495671
Date last updated: 12/8/2016
Date last checked: 12/1/2016
Distance searched: 0.25 miles
Sites:
None Found

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NEI-LF-CA
NEI (National Emission Inventory) Landfill Point Sources
Category: ERS Supplemental Govt Sources
Description: This database contains National Emission Inventory Landfill Point Sources reported by the California Air Resources Board. ARB reported this data to the NEI back in 1999.
Agency: California Air Resources Board
Phone Number: 9163222990
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

NPDES-CA
National Pollutant Discharge Elimination System
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of National Pollutant Discharge Elimination System (NPDES) permits registered through the California EPA.
Agency: California Environmental Protection Agency
Phone Number: 8665633107
Date last updated: 12/16/2016
Date last checked: 12/6/2016
Distance searched: 0.063 miles
Sites:
None Found

NPDES-SW-CA
Notice of Intent Data
Category: ERS Supplemental Govt Sources
Description: This database contains dischargers that have submitted Notice of Intent (NOIs) as reported by the California State Water Resources Control Board.
Agency: California State Water Resources Control Board
Phone Number: 8665633107
Date last updated: 12/16/2016
Date last checked: 5/12/2016
Distance searched: 0.063 miles
Sites:
None Found

NPL-R9-US
NPL Region 9 Site Boundaries
Category: Federal NPL

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Description: This database contains the boundaries of the NPL sites within the specified EPA region.
Agency: Environmental Protection Agency
Phone Number: 4159478000
Date last updated: 7/26/2017
Date last checked: 7/26/2017
Distance searched: 1 mile
Sites:
B.F. GOODRICH MapID: A1 Currently on the Final NPL

NPL-US
National Priorities List
Category: Federal NPL
Description: The National Priorities List is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. This database contains a listing of NPL sites.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 9/13/2017
Date last checked: 8/28/2017
Distance searched: 1 mile
Sites:
None Found

OGM-CA
Oil and Gas Monitoring
Category: ERS Supplemental Govt Sources
Description: This database includes Oil and Gas Monitoring wells reported by the California State Water Resource Control Board.
Agency: California State Water Resource Control Board
Phone Number: 8665633107
Date last updated: 8/8/2017
Date last checked: 7/18/2017
Distance searched: 0.063 miles
Sites:
None Found

OGW-CA
California Oil and Gas Wells
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of Oil and Gas Wells maintained by the Department of Conservation.
Agency: California Department of Conservation

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Phone Number: 9163231779
Date last updated: 4/7/2017
Date last checked: 3/29/2017
Distance searched: 0.063 miles
Sites:
None Found

OSCF-CA
Orphan Site Cleanup Fund
Category: ERS Supplemental Govt Sources
Description: This database contains sites listed under the Orphan Site Cleanup Fund. OSCF is a financial assistance program within the Division of Financial Assistance. OSCF was established to provide financial assistance to eligible applicants for the cleanup of brownfields sites contaminated by leaking petroleum underground storage tanks where there is no financially responsible party.
Agency: California State Water Resource Control Board
Phone Number: 9163415760
Date last updated: 11/23/2016
Date last checked: 11/16/2016
Distance searched: 0.5 miles
Sites:
None Found

PADS-US
PCB Registration Database System
Category: Federal ASTM Other
Description: This database contains a listing of generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.
Agency: United States Environmental Protection Agency
Phone Number: 2025660500
Date last updated: 9/13/2017
Date last checked: 8/29/2017
Distance searched: 0.063 miles
Sites:
None Found

PCB-US
PCB Transformers
Category: Federal ASTM Other
Description: PCB Transformer Registration Database. This database indicates the best known current status of registered PCB transformers
Agency: United States Environmental Protection Agency
Phone Number: 7033088404
Date last updated: 8/28/2017
Date last checked: 8/28/2017

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Distance searched: 0.25 miles
Sites:
None Found

PCS-US
Permit Compliance System for Clean Water Act
Category: ERS Supplemental Govt Sources
Description: PCS is an information management system maintained by the Office of Compliance to track permit compliance and enforcement status of facilities regulated by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act. PCS is designed to support the NPDES program at the state, regional, and national levels.
Agency: United States Environmental Protection Agency
Phone Number: 2025640221
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.25 miles
Sites:
None Found

Perch1-CA
Perchlorate Confirmed Contaminant Sites
Category: ERS Supplemental Govt Sources
Description: This database contains sites with perchlorate contamination as reported by the State Water Resource Control Board.
Agency: State Water Resource Control Board
Phone Number: 9517824902
Date last updated: 8/9/2017
Date last checked: 7/24/2017
Distance searched: 0.25 miles
Sites:
None Found

Perch2-CA
Perchlorate Confirmed Contaminant Sites
Category: ERS Supplemental Govt Sources
Description: This database contains sites with perchlorate contamination as reported by the State Water Resource Control Board.
Agency: State Water Resource Control Board
Phone Number: 9517824902
Date last updated: 8/8/2017
Date last checked: 7/27/2017
Distance searched: 0.25 miles
Sites:
None Found

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PR-MOA-CA
Polanco Redevelopment MOA Sites
Category: State/Tribal ASTM Other
Description: This database contains the Polanco Redevelopment Memorandum of Agreement (MOA) sites reported by the Department of Toxic Substances Control.
Agency: California Department of Toxic Substances Control
Phone Number: 9162553586
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

Proposed-NPL-US
Proposed NPL Sites
Category: Federal NPL
Description: The EPA provides information on the assessment and remediation of current hazardous waste sites. The site in this database have been proposed for the NPL list.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 9/13/2017
Date last checked: 8/28/2017
Distance searched: 1 mile
Sites:
None Found

RADINFO-US
Radiation Information Database
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of facilities that are regulated by the US EPA regulations for radiation and radioactivity.
Agency: United States Environmental Protection Agency
Phone Number: 2023439775
Date last updated: 9/13/2017
Date last checked: 8/29/2017
Distance searched: 0.063 miles
Sites:
None Found

RCRA-CESQG-US
Resource Conservation and Recovery Act, Conditionally Exempt Small Quantity Generators (aka RCRA CESQG)

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Category: Federal RCRA Generators
Description: The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law provides explicit, legally enforceable requirements for waste management. These regulations can be found in title 40 of the Code of Federal Regulations (CFR), parts 239 through 282. This database contains listings of Conditionally Exempt Small Quantity Generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 10/16/2017
Date last checked: 8/31/2017
Distance searched: 0.25 miles
Sites:
None Found

RCRA-COR-US
Resource Conservation and Recovery Act, - Corrective Actions (aka RCRA CORRACTS)
Category: Federal RCRA CORRACTS
Description: The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law provides explicit, legally enforceable requirements for waste management. These regulations can be found in title 40 of the Code of Federal Regulations (CFR), parts 239 through 282. Under a program entitled Corrective Action, the EPA has the statutory authority to require permitted and interim status facilities to clean up hazardous waste contamination. This database contains llistings of sites that have had corrective action.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 10/16/2017
Date last checked: 8/31/2017
Distance searched: 1 mile
Sites:
None Found

RCRA-LQG-US
Resource Conservation and Recovery Act, Large Quantity Generators (aka RCRA LQG)
Category: Federal RCRA Generators
Description: The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law provides explicit, legally enforceable requirements for waste management. These regulations can be found in title 40 of the Code of Federal Regulations (CFR), parts 239 through 282. Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste. This database contains listings of Large Quantity Generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 10/16/2017
Date last checked: 8/31/2017
Distance searched: 0.25 miles

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Sites:
None Found

RCRA-NON-US
Resource Conservation and Recovery Act, Non-Hazardous Generators (aka RCRA Non-Haz, RCRA NonGen, RCRA No longer Regulated)
Category: Federal RCRA Generators
Description: The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law provides explicit, legally enforceable requirements for waste management. These regulations can be found in title 40 of the Code of Federal Regulations (CFR), parts 239 through 282. Title 40 of the CFR parts 239 through 259 contain the regulations for non-hazardous solid waste. This database contains listings of RCRA non-hazardous hazardous solid waste generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 10/16/2017
Date last checked: 8/31/2017
Distance searched: 0.25 miles
Sites:
None Found

RCRA-SQG-US
Resource Conservation and Recovery Act, Small Quantity Generators (aka RCRA SQG)
Category: Federal RCRA Generators
Description: The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law provides explicit, legally enforceable requirements for waste management. These regulations can be found in title 40 of the Code of Federal Regulations (CFR), parts 239 through 282. Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month. This database contains listings of Small Quantity Generators.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 10/16/2017
Date last checked: 8/31/2017
Distance searched: 0.25 miles
Sites:
None Found

RCRA-TSDF-US
Resource Conservation and Recovery Act -, Treatment, Storage, and Disposal Facilities (aka RCRA TSD, RCRA TSDF)
Category: Federal RCRA non-CORRACTS TSD

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Description: The Resource Conservation and Recovery Act (RCRA) is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. The law provides explicit, legally enforceable requirements for waste management. These regulations can be found in title 40 of the Code of Federal Regulations (CFR), parts 239 through 282. Treatment, Storage, and Disposal Facilities (TSDFs) are subject to recordkeeping and reporting requirements, permitting, and technical standards covering the treatment, storage, disposal location, construction, and operation of TSDFs as set forth in 40 CFR Parts 264 and 265. This database contains listings of Treatment, Storage, and Disposal.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 10/16/2017
Date last checked: 8/31/2017
Distance searched: 0.5 miles
Sites:
None Found

Response-CA
State Response Sites and National Priorities List (NPL)
Category: State/Tribal NPL
Description: This database includes one component of the Cortese List Data by identifying State Response and National Priorities List (NPL) (Federal Superfund) sites listed under Health and Safety Code section 25356.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400
Date last updated: 11/1/2017
Date last checked: 10/26/2017
Distance searched: 1 mile
Sites:
None Found

RFG-Lab-US
Reformulated Gasoline (RFG)
Category: ERS Supplemental Govt Sources
Description: This database includes the list of registered Reformulated Gasoline Laboratories.
Agency: Environmental Protection Agency, United States
Phone Number: 2023439303
Date last updated: 1/13/2017
Date last checked: 1/6/2017
Distance searched: 0.25 miles
Sites:
None Found

RMP-US
Risk Management Plans
Category: ERS Supplemental Govt Sources

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Description: This database contains facilities that have developed risk management plans as reported by the Environmental Protection Agency. The System for Risk Management Plans (SRMP) is a suite of electronic systems containing information relating to risk management plans submitted by facilities in accordance with the Clean Air Act, Section 112(r). Affected facilities are to develop risk management programs which will prevent and minimize consequences of accidental releases of certain hazardous chemicals that could harm public health and the environment.
Agency: United States Environmental Protection Agency
Phone Number: 2025642491
Date last updated: 7/28/2017
Date last checked: 6/21/2017
Distance searched: 0.063 miles
Sites:
None Found

ROD-US
Records of Decision
Category: ERS Supplemental Govt Sources
Description: The Record of Decision (ROD) is a public document that explains which cleanup alternatives will be used to clean up a Superfund site. The ROD for sites listed on the NPL (NPL Site Listing Process) is created from information generated during the Remedial Investigation/Feasibility Study (RI/FS).A ROD contains site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, scope and role of response action and the remedy selected for cleanup. This database contains a listing of sites with RODs.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 4/28/2017
Date last checked: 4/20/2017
Distance searched: 0.5 miles
Sites:
None Found

SAA-Agreements-US
Sites with Superfund Alternative Approach Agreements
Category: Federal ASTM Other
Description: This database contains sites that have a Superfund Alternative agreement. The Superfund alternative (SA) approach uses the same investigation and cleanup process and standards that are used for sites listed on the NPL. The SA approach is an alternative to listing a site on the NPL; it is not an alternative to Superfund or the Superfund process.
Agency: United States Environmental Protection Agency
Phone Number: 2025645110
Date last updated: 9/12/2017
Date last checked: 8/31/2017
Distance searched: 1 mile
Sites:
None Found

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School-Active-CA

EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)

Category: State/Tribal Voluntary Cleanup Sites

Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is school sites with a status of Active that are being evaluated by DTSC for possible hazardous materials contamination.

Agency: California Department of Toxic Substances Control

Phone Number: 8777869427

Date last updated: 11/3/2017

Date last checked: 10/27/2017

Distance searched: 0.5 miles

Sites:

None Found

School-NFA-CA

EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)

Category: State/Tribal Voluntary Cleanup Sites

Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is school sites with a status of No Further Action.

Agency: California Department of Toxic Substances Control

Phone Number: 8777869427

Date last updated: 11/3/2017

Date last checked: 10/27/2017

Distance searched: 0.5 miles

Sites:

None Found

School-Other-CA

EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)

Category: State/Tribal Voluntary Cleanup Sites

Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is school sites without a status of Active or No Further Action.

Agency: California Department of Toxic Substances Control

Phone Number: 8777869427

Date last updated: 11/3/2017

Date last checked: 10/27/2017

Distance searched: 0.5 miles

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Sites:
None Found

SDWIS-US
Safe Drinking Water Information System
Category: ERS Supplemental Govt Sources
Description: This database contains the Safe Drinking Water Information including Public Water, Source and Treatment, Enforcements and Violations reported by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 9/22/2017
Date last checked: 6/26/2017
Distance searched: 0.25 miles
Sites:
None Found

SGV-Deep-Plumes-CA
San Gabriel Valley Deep Plumes
Category: State/Tribal Solid Waste
Description: Contamination plume boundaries that are part of the San Gabriel Valley Superfund areas.
Agency: Environmental Protection Agency
Phone Number: 4159478000
Date last updated: 8/9/2017
Date last checked: 8/9/2017
Distance searched: 1 mile
Sites:
None Found

SGV-Shallow-Plumes-CA
San Gabriel Valley Shallow Plumes
Category: State/Tribal Solid Waste
Description: Contamination plume boundaries that are part of the San Gabriel Valley Superfund areas.
Agency: Environmental Protection Agency
Phone Number: 4159478000
Date last updated: 8/9/2017
Date last checked: 8/9/2017
Distance searched: 1 mile
Sites:
None Found

SGV-Shallow-Plumes-Puente-Valley-CA
Puente Valley Shallow Plumes

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Category: State/Tribal Solid Waste
Description: Contamination plume boundaries that are part of the San Gabriel Valley Superfund areas.
Agency: Environmental Protection Agency
Phone Number: 4159478000
Date last updated: 7/11/2017
Date last checked: 7/11/2017
Distance searched: 1 mile
Sites:
None Found

SLIC-Closed-CA
Geotracker - The Spills, Leaks, Investigation & Cleanup (SLIC), Closed Cases
Category: Emergency Release Reports
Description: GeoTracker is the California State Water Resources Control Board's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. The system is used by the State Board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks. The Spills, Leaks, Investigation & Cleanup (SLIC) Program deals with site investigation and corrective action involving sites not overseen by the Underground Tank Program and the Well Investigation Program. These particular sites have had all remediation completed and are now considered closed by the agency.
Agency: California State Water Resources Control Board
Phone Number: 8664801028
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

SLIC-Open-CA
Geotracker -Spills, Leaks, Investigation & Cleanup (SLIC), Open Cases
Category: Emergency Release Reports
Description: GeoTracker is the California State Water Resources Control Board's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. The system is used by the State Board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks. The Spills, Leaks, Investigation & Cleanup (SLIC) Program deals with site investigation and corrective action involving sites not overseen by the Underground Tank Program and the Well Investigation Program. These particular sites are considered open by the agency.
Agency: California State Water Resources Control Board
Phone Number: 8664801028
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles

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Sites:
None Found

SML-CA
Site Mitigation List
Category: State/Tribal ASTM Other
Description: This database contains sites listed by the Site Mitigation Unit (SMU) program at the Los Angeles County Fire Department. SMU voluntary oversight and corrective action oversight programs are options in addition to DTSC and Regional Water Quality Control Board (RWQCB) oversight programs for residents and businesses of Los Angeles County seeking oversight in a cost effective and timely manner for cleanup of their contaminated properties. A (Y) abated column in data does not always mean the site is closed. Please contact the SMU department for a file review.
Agency: Los Angeles County Fire Department
Phone Number: 3238904106
Date last updated: 6/16/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

Spills-SSO-CA
Sanitary Sewer System
Category: ERS Supplemental Govt Sources
Description: This database contains private lateral sewage discharges contained in the State Water Resources Control Board's SSO database.
Agency: State Water Resource Control Board
Phone Number: 8667924977
Date last updated: 8/16/2017
Date last checked: 8/4/2017
Distance searched: 0.25 miles
Sites:
None Found

SSTS-US
Section 7 Tracking System
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of EPA-registered domestic pesticide-producing and device producing establishments and the pesticides produced based on data in the Section Seven Tracking System.
Agency: United States Environmental Protection Agency
Phone Number: 2025644203
Date last updated: 7/28/2017
Date last checked: 6/26/2017
Distance searched: 0.063 miles

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Sites:
None Found

State-Response-Active-CA
EnviroStor State Response Active Sites
Category: State/Tribal NPL
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is State Response Active sites. These sites are confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high priority and high potential risk.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 1 mile
Sites:
None Found

State-Response-NFA-CA
EnviroStor State Response NFA Sites
Category: State/Tribal NPL
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is State Response sites that have a status of No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

State-Response-Other-CA
EnviroStor State Response Other Sites
Category: State/Tribal NPL
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The subset of cases included in this database is State Response sites without an Active or No Further Action status.
Agency: California Department of Toxic Substances Control
Phone Number: 9163233400

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Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

Superfund-Active-CA
Envirorstor Superfund Active Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)
Category: State/Tribal CERCLIS Equivalent
Description: This database contains a listing of Federal Superfund Sites identified by the U.S. EPA where the Department of Toxic Substances Control is actively involved, either in a lead or support capacity, in the investigation and/or remediation currently in progress. This subset of cases have a status of Active.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 1 mile
Sites:
None Found

Superfund-NFA-CA
EnviroStor Superfund NFA Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)
Category: State/Tribal CERCLIS Equivalent
Description: This database contains a listing of Federal Superfund Sites identified by the U.S. EPA where the Department of Toxic Substances Control is actively involved, either in a lead or support capacity in the investigation and/or remediation currently in progress. This subset of cases have received No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 1 mile
Sites:
None Found

Superfund-Other-CA
EnviroStor Superfund Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)
Category: State/Tribal CERCLIS Equivalent

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Description: This database contains a listing of Federal Superfund Sites identified by the U.S. EPA where Department of Toxic Substances Control is actively involved, either in a lead or support capacity in the investigation and/or remediation currently in progress. This subset of cases do not have a status of Active, Certified, or No Further action. These sites include statuses of Inactive, Referred to Another Agency, Backlogged, etc.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 1 mile
Sites:
None Found

SWIS-CA
Solid Waste Information System
Category: State/Tribal Landfill/Solid Waste
Description: The Solid Waste Information System (SWIS) database contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites.
Agency: California Department of Resources Recycling and Recovery
Phone Number: 8007329253
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

SWLF-US
Solid Waste Facilities
Category: Federal Solid Waste
Description: This dataset represents verified locations of ACTIVE permitted Municipal Solid Waste facilities as well as ACTIVE permitted Construction and Demolition waste facilities. It is not intended to be a comprehensive inventory of all permitted solid waste facilities. Specifically excluded from this collection are facilities that accept hazardous waste, industrial waste facilities, waste collection/transfer sites and other specialty waste facilities.
Agency: Oak Ridge National Laboratory, GIST
Phone Number: 8652413976
Date last updated: 9/12/2017
Date last checked: 8/31/2017
Distance searched: 0.5 miles
Sites:
None Found

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SWRCY-CA
Beverage Container Recycler Database
Category: State/Tribal ASTM Other
Description: This is a master list of all Beverage Container Recycling Programs and their locations.
Agency: California Department of Resources Recycling and Recovery
Phone Number: 9163233008
Date last updated: 11/7/2017
Date last checked: 11/1/2017
Distance searched: 0.5 miles
Sites:
None Found

TierPer-CA
Tiered Permits
Category: ERS Supplemental Govt Sources
Description: This database contains facilities with a Tiered Permit reported by the California Department of Toxic and Substance Control. These facilities manage waste not regulated under RCRA, but regulated as a hazardous waste by the State of California. These facilities include, but are not limited to recyclers, oil transfer stations, and precious metals recyclers.
Agency: California Department of Toxic and Substance Control.
Phone Number: 9163233400
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

TOMS-CA
Topographically Occurring Mine Symbols
Category: ERS Supplemental Govt Sources
Description: In 1998, the Office of Mine Reclamation began inventorying abandoned mined lands as part of a program to produce a report describing the "scope and magnitude" of abandoned mine issues in California. To support this effort, the Office began digitizing mining features from scanned USGS topographic quadrangles. Each of the 7.5-minute USGS topographic quadrangles was examined and all mining features were digitized and annotated with information derived from the map. Positional accuracy was reliant on the accuracy of the original source maps. Human digitization of the mining symbols has likely added slight deviations from the original source map, though no formal method has been undertaken to quantify this additional error. In 2001, we completed the digitizing process for all 7.5-minute topographic quadrangles covering the state.
Agency: California Division of Mines and Geology
Phone Number: 9163239198
Date last updated: 8/30/2017
Date last checked: 8/3/2017
Distance searched: 0.063 miles
Sites:

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None Found

Tribal-Air-US
Tribal Air Permitted Facilities
Category: ERS Supplemental Govt Sources
Description: This database contains tribal locations that have been issued air permits as reported by the US Environmental Protection Agency. At this time the database includes region 2, 5, 7, 8, 9, 10.
Agency: United States Environmental Protection Agency
Phone Number: 3123532000
Date last updated: 4/21/2017
Date last checked: 3/20/2017
Distance searched: 0.25 miles
Sites:
None Found

Tribal-LUST-Closed-Reg9
Tribal Leaking Underground Storage Tanks, Region 9 (aka Indian Lust)
Category: Federal LUST
Description: This database contains a listing of closed Leaking Underground Storage Tank cases on Native American Land as identified by the United States Environmental Protection Agency, Region 9.
Agency: United States Environmental Protection Agency
Phone Number: 2025640663
Date last updated: 9/17/2017
Date last checked: 9/1/2017
Distance searched: 0.5 miles
Sites:
None Found

Tribal-LUST-Open-Reg9
Tribal Leaking Underground Storage Tanks , Region 9 (aka Indian Lust)
Category: Federal LUST
Description: This database contains a listing of open Leaking Underground Storage Tank cases on Native American Land as identified by the United States Environmental Protection Agency, Region 9.
Agency: United States Environmental Protection Agency
Phone Number: 2025640663
Date last updated: 9/17/2017
Date last checked: 9/1/2017
Distance searched: 0.5 miles
Sites:
None Found

Tribal-ODI-US
Tribal Open Dump Sites

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Category: Federal Solid Waste
Description: This database contains a listing of Open Dump Sites on Native American Land identified by the Indian Health Service
Agency: Indian Health Service
Phone Number: 3014431046
Date last updated: 8/29/2017
Date last checked: 8/29/2017
Distance searched: 0.5 miles
Sites:
None Found

Tribal-UST-Reg9
Tribal Underground Storage Tanks (aka Tribal UST)
Category: Federal UST
Description: This database contains a listing of Underground Storage Tanks on Native American Land identified by the United States Environmental Protection Agency in Region 9 (Pacific Southwest).
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 9/7/2017
Date last checked: 9/7/2017
Distance searched: 0.25 miles
Sites:
None Found

Tribal-VCP-US
Tribal VCP
Category: Federal Tribal VCP
Description: This database contains voluntary cleanup sites located in tribal land as reported by the United States Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 4/5/2017
Date last checked: 4/5/2017
Distance searched: 0.5 miles
Sites:
None Found

TRIS2000-US
Toxics Release Inventory System
Category: ERS Supplemental Govt Sources

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Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 2000-2009.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

TRIS2010-US
Toxics Release Inventory System
Category: ERS Supplemental Govt Sources
Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 2010-2014. 2014 is currently the most recent year available in the TRI.NET program.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: 1/27/2017
Date last checked: 1/10/2017
Distance searched: 0.063 miles
Sites:
None Found

TRIS80-US
Toxics Release Inventory System
Category: ERS Supplemental Govt Sources
Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 1987-1989.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

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TRIS90-US
Toxics Release Inventory System
Category: ERS Supplemental Govt Sources
Description: TRIS is a EPA database reported annually by certain covered industry groups, as well as federal facilities. It contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment, and includes information about waste management and pollution prevention activities. This database contains a listing of facilities that reported in the years between 1990-1999.
Agency: United States Environmental Protection Agency
Phone Number: 8004249346
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

TSCA-US
Toxics Substance Control Sites
Category: ERS Supplemental Govt Sources
Description: TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon and lead-based paint. This database contains a listing of these facilities.
Agency: United States Environmental Protection Agency
Phone Number: 2025642501
Date last updated: 9/21/2017
Date last checked: 8/30/2017
Distance searched: 0.063 miles
Sites:
None Found

UIC2-CA
Injection Wells
Category: ERS Supplemental Govt Sources
Description: This database contains Injection Wells as reported by the State Water Resource Control Board.
Agency: California State Water Resources Control Board
Phone Number: 8665633107
Date last updated: 12/8/2016
Date last checked: 12/5/2016
Distance searched: 0.063 miles
Sites:
None Found

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UIC-CA
Underground Injection Control Wells
Category: ERS Supplemental Govt Sources
Description: This database contains Underground Injection Control Wells regulated by the California Department of Conservation.
Agency: California Department of Conservation
Phone Number: 9163231779
Date last updated: 12/16/2016
Date last checked: 12/1/2016
Distance searched: 0.063 miles
Sites:
None Found

UMTRA-US
Uranium Mill Tailings Remedial Action Sites
Category: ERS Supplemental Govt Sources
Description: The Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 gave the U.S. Department of Energy (DOE) the responsibility of stabilizing, disposing, and controlling uranium mill tailings and other contaminated material at twenty-four uranium mill processing sites located across ten states and at approximately 5,200 associated properties.
Agency: Department of Energy
Phone Number: 5058450011
Date last updated: Historical Database
Date last checked: N/A
Distance searched: 0.063 miles
Sites:
None Found

USGS-Waterwells-US
Ground Water Site Inventory
Category: ERS Supplemental Govt Sources
Description: This database contains a listing of wells, springs, test holes, tunnels, drains, and excavations reported by the United States Geological Survey, Water Resources Program.
Agency: United States Geological Survey, Water Resources Program
Phone Number: 9162783000
Date last updated: 2/10/2017
Date last checked: 1/17/2017
Distance searched: 0.063 miles
Sites:
None Found

UST-Abandoned-CA
Abandoned UST Initiative (aka Inventory of Abandoned Tank Sites)
Category: State/Tribal UST

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Description: Since November 2012, the California State Water Resources Control Board (State Water Board) and the U.S. Environmental Protection Agency (U.S. EPA), in collaboration with Sullivan International Group, Inc., have been working with the Unified Program Agencies (UPAs) to address the abandoned or improperly closed USTs across the State of California. USTs are considered abandoned when regulated substances are no longer stored within those USTs and/or when monitoring requirements of the Operating Permit, Title 23 of California Code or Regulations, and California Health and Safety Code 25298 are not being implemented. This database contains an inventory of abandoned UST sites reported by the California State Water Resources Control Board.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 6/2/2017
Date last checked: 5/4/2017
Distance searched: 0.25 miles
Sites:
None Found

UST-CA
Geotracker - Underground Storage Tanks
Category: State/Tribal UST
Description: GeoTracker is the California State Water Resources Control Board's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. The system is used by the State Board, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from underground storage tanks. This database contains permitted USTs that have been extracted from Geotracker.
Agency: California State Water Resources Control Board
Phone Number: 8664801028
Date last updated: 11/1/2017
Date last checked: 10/26/2017
Distance searched: 0.25 miles
Sites:
None Found

UST-Closed-CA
UST Case Closure Review Denials and Approved Orders (aka Closure of Underground Storage Tank (UST) Cases)
Category: State/Tribal UST

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Description: The Underground Storage Tank Cleanup Fund provides a means for petroleum UST owners and operators to meet the federal and state requirements of maintaining financial responsibility to pay for any damages arising from their tank operations. The Fund assists a large number of small businesses and individuals by providing reimbursement for expenses associated with the cleanup of leaking USTs. The Fund also provides money to the Regional Water Boards and local regulatory agencies to abate emergency situations or to cleanup abandoned sites that pose a threat to human health, safety, and the environment, as a result of a UST petroleum release. This database contains UST tanks that have been closed under the Underground Storage Tank Cleanup Fund as reported by the California State Water Resource Control Board.
Agency: California State Water Resource Control Board
Phone Number: 8008133863
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

USTComp-CA
Previously Abandoned Tanks Now in Compliance (aka Compliance UST)
Category: State/Tribal UST
Description: Since November 2012, the California State Water Resources Control Board (State Water Board) and the U.S. Environmental Protection Agency (U.S. EPA), in collaboration with Sullivan International Group, Inc., have been working with the Unified Program Agencies (UPAs) to address the abandoned or improperly closed USTs across the State of California. USTs are considered abandoned when regulated substances are no longer stored within those USTs and/or when monitoring requirements of the Operating Permit, Title 23 of California Code or Regulations, and California Health and Safety Code 25298 are not being implemented. This database contains previously abandoned UST sites that are now in compliance as reported by the California State Water Resources Control Board.
Agency: California State Water Resources Control Board
Phone Number: 9163415808
Date last updated: 6/2/2017
Date last checked: 5/4/2017
Distance searched: 0.25 miles
Sites:
None Found

UST-CRSP-CA
Underground Storage Tanks
Category: State/Tribal UST
Description: Underground Storage Tanks listed on the CalEPA Regulated Site Portal. The portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. For information on a particular site, contact the appropriate agency:
California Environmental Reporting System (CERS): cers@calepa.ca.gov
California Integrated Water Quality System (CIWQS): 866-79-CIWQS

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EnviroStor Cleanup/Haz Waste: 877-786-9427
GeoTracker: 866-480-1028
Toxics Release Inventory (TRI): 800-424-9346
Agency: Cal EPA
Phone Number: 9164455049
Date last updated: 11/8/2017
Date last checked: 10/27/2017
Distance searched: 0.25 miles
Sites:
None Found

UST-Priority-CA
UST Cleanup Fund Priority List
Category: State/Tribal UST
Description: The Underground Storage Tank Cleanup Fund provides a means for petroleum UST owners and operators to meet the federal and state requirements of maintaining financial responsibility to pay for any damages arising from their tank operations. The UST Cleanup Fund places all eligible claims on the Priority List until funding is available to reimburse their corrective action costs. Claims are placed and ranked on the Priority List by the assigned priority class and the date the UST Cleanup Fund received a complete application. This database includes current cleanup cases that are listed on the Cleanup Fund Priority List.
Agency: California State Water Resources Control Board
Phone Number: 8008133863
Date last updated: 10/31/2017
Date last checked: 10/26/2017
Distance searched: 0.5 miles
Sites:
None Found

UST-Proposed-CA
Proposed Closure of UST Cases (aka UST Proposed for Closure)
Category: State/Tribal UST
Description: The Underground Storage Tank Cleanup Fund provides a means for petroleum UST owners and operators to meet the federal and state requirements of maintaining financial responsibility to pay for any damages arising from their tank operations. The Fund assists a large number of small businesses and individuals by providing reimbursement for expenses associated with the cleanup of leaking USTs. This database contains UST's that are being considered for closure by the SWRCB or the Executive Director.
Agency: California State Water Resources Control Board
Phone Number: 8008133863
Date last updated: 11/3/2017
Date last checked: 10/26/2017
Distance searched: 0.25 miles
Sites:
None Found

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Vapor-Intrusions-US
Vapor Intrusion Database
Category: ERS Supplemental Govt Sources
Description: This database contains the vapor intrusion database as reported by the Environmental Protection Agency.
Agency: United States Environmental Protection Agency
Phone Number: 7033057411
Date last updated: 8/22/2017
Date last checked: 8/22/2017
Distance searched: 0.5 miles
Sites:
None Found

VCP-Active-CA
EnviroStor VCP Active Sites
Category: State/Tribal Voluntary Cleanup Sites
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The Voluntary Cleanup Program allows DTSC to provide oversight to motivated parties to address Brownfields sites. The subset of cases included in this database is Voluntary Cleanup Program sites with a status of Active.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:
None Found

VCP-NFA-CA
EnviroStor Database VCP NFA Listing
Category: State/Tribal Voluntary Cleanup Sites
Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The Voluntary Cleanup Program allows DTSC to provide oversight to motivated parties to address Brownfields sites. The subset of cases included in this database is Voluntary Cleanup Program sites with a status of No Further Action.
Agency: California Department of Toxic Substances Control
Phone Number: 8777869427
Date last updated: 11/3/2017
Date last checked: 10/27/2017
Distance searched: 0.5 miles
Sites:

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None Found

VCP-Other-CA

EnviroStor VCP Other Sites

Category: State/Tribal Voluntary Cleanup Sites

Description: EnviroStor is the Department of Toxic Substances Control's data management system for tracking cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons to investigate further. The Voluntary Cleanup Program allows DTSC to provide oversight to motivated parties to address Brownfields sites. The subset of cases included in this database is Voluntary Cleanup Program sites without a status of Active or No Further Action.

Agency: California Department of Toxic Substances Control

Phone Number: 8777869427

Date last updated: 11/3/2017

Date last checked: 10/27/2017

Distance searched: 0.5 miles

Sites:

None Found

WDR-CA

Waste Discharge Requirements

Category: ERS Supplemental Govt Sources

Description: This database contains sites in the Waste Discharge Requirements (WDRs) Program that regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act as reported by the California State Water Resource Control Board.

Agency: California State Water Resource Control Board

Phone Number: 8667924977

Date last updated: 8/4/2017

Date last checked: 7/27/2017

Distance searched: 0.25 miles

Sites:

None Found

Wells-CA

California Wells

Category: ERS Supplemental Govt Sources

Description: This database includes wells identified by well completed reports. The agency has notified us not this database does not include all wells in california as this is still a work in progress. The database includes approximately 500K wells.

Agency: California Department of Water Resources

Phone Number: 9166535791

Date last updated: 8/15/2017

Date last checked: 7/18/2017

Distance searched: 0.063 miles

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Sites:
None Found

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UN-MAPPABLE OCCURRENCES

The following occurrences were not mapped primarily due to incomplete or inaccurate address information. All of the following occurrences were determined to share the same zip code as the area searched. General status information is given with each occurrence along with any address information entered by the agency responsible for the list.

ID	Facility Name	Address	Database	Status
No "un-mapped" sites requested.				

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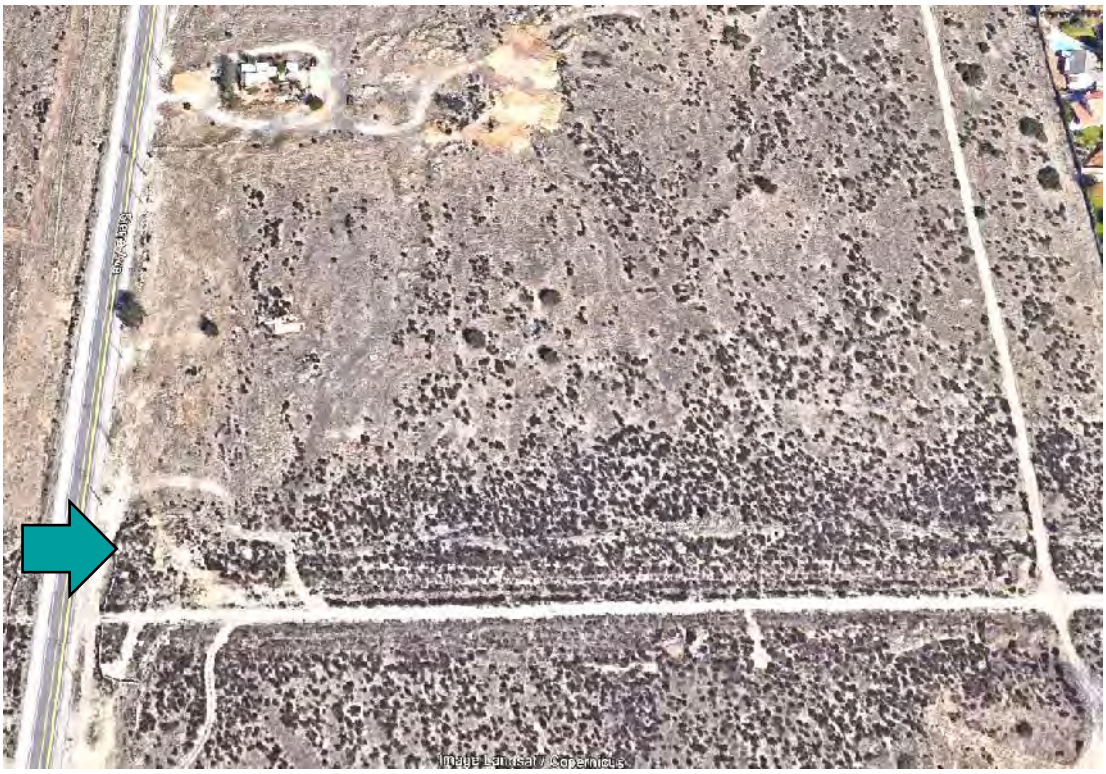
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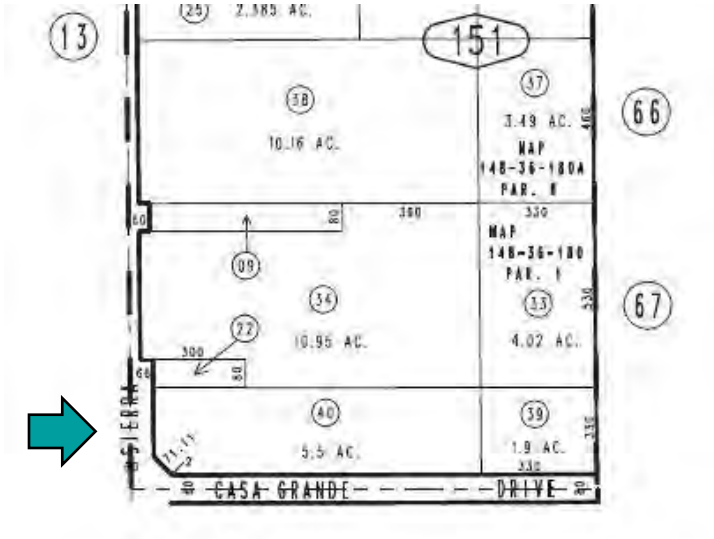
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S & S Commercial Environmental Services, INC.

Ph (949)650-4994 Fax (909)498-0302 e-mail s.quart@verizon.net s.quart@att.net





Top: North Side of Subject Property
Bottom: South Side of Subject Property

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT
APN 023915140
NE Corner of N Sierra Avenue and W. Casa Grande Drive
Fontana, CA 92336

6693 Moonriver Street Eastvale, CA 91752

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LENDER-CLIENT PRIVILEGE WORK PRODUCT

ATTN: WEINER FAMILY REVOCABLE TRUST
C/O Gerald W. Beard Realty, Inc.
285 W. Rialto Avenue
Rialto, CA 92376

RE: Phase I Environmental Site Assessment **N 34-9-32, W 117-26-7 (NAD 83)**
APN 0239 - 151 - 40 **34.158838, -117.435362**
NE Corner N Sierra Avenue
and W. Casa Grande Drive
Fontana CA 92336

1.0 INTRODUCTION

This report presents the results of our Phase I Environmental Site Assessment performed on the subject property known as the NE Corner N Sierra Avenue and W. Casa Grande Drive in the City of Fontana in San Bernardino County, California. There were no Special Conditions for this Report. The User is the addressee above.

The site inspection was performed on Thursday January 4, 2018.

A Preliminary Title Report was provided by the Client to review for Environmental Liens. None were identified in that report.

This report relies in part upon a study done of base closures prepared by Science Applications International Corporation for the U.S. Army Corps of Engineers Los Angeles District in 2004. A map from that report with the former storage area superimposed is in 12.3 Topographic Map in the Appendix and shows the subject property and adjoining and adjacent properties north, south and directly east outside the area of concern.

The subject property was on the southwestern edge of the Rialto Ammunition Back-Up Storage Point (Rialto Military Reservation) from 1941 until 1945 when the Rialto Military Reservation was declared excess and sold off over the next couple of years. The first mention of the subject property was found in the San Bernardino Property Records Search in 1975 when the subject property parcel was separated from a larger parcel. In 1982 the subject property became part of a larger Fontana Redevelopment Agency North Fontana Redevelopment Project.

A residential home and garage is shown in the 1959 and 1966 aerial photographs.

A party named Dunlop appears to have been the first owner as residential with the property being granted to Steven Riddle in 1987 by both the Dunlop Family Trust and Bello Construction. Cecilia Bello was granted the property in 1995. In 2002 and 2004 the property again changed hands inter family as Hopper is added to the ownership as a spousal name.

The west side of the subject property was residential for a number of years between the 1940's to 1980's but was shown as vacant in 1995. Adjoining and adjacent properties have included a single family home to the north which is now gone, the SCE high voltage power line to the east, an SCE easement on the south and vacant land to the west across N Sierra Avenue.

According to the City of Fontana Planning Records the subject property is now across N. Sierra Avenue adjacent to the Fontana City Arboretum Specific Plan for a planned residential community.

Based upon all that was learned during the research, no Environmental Liens are expected.

Current State of California & Federal Agency Web Data Reviewed For This Report

*	Cal-EPA	Envirostor
*	Regional Water Quality Control Board	Geotracker
*	Dept of Conservation (DOGGR)	Div of Oil & Gas
*	SCAQMD	Finds

No *Significant Data Gaps* were identified. Greatest reliance was on Building Records with the San Bernardino County Assessors Office, Base Closure Report and Historical Aerials.

Cross Streets Directories were not reviewed for known occupancies due to the known occupancies of the subject property.

Sanborn Fire Insurance Maps were not available for the completion of this report as they were discontinued before property development. (See appendix)

An Underground Tank Research Request was not submitted due to the known activities on the subject property since the early 1900's and lack of any indicators for underground storage tanks in operations.

De Minimis Environmental Conditions include environmental concerns identified by S&S that warrant discussion but do not qualify as RECs, as defined by the ASTM Standard Practice E1527-13. S&S's assessment did not reveal any significant De Minimis environmental conditions associated with the subject property or nearby properties.

S&S's Assessment includes a review of as built drawings and specifications printed on the drawings and permits used in the construction of the buildings as available. This review and site inspection related to Scope Considerations and Non-Scope Considerations or De Minimis Environmental Conditions associated with the subject property or nearby properties including asbestos containing materials, radon, lead-based paint, lead in drinking water, mold, flood plain and unsatisfactory indoor air quality that were further inspected with the results in 2.0 Principal Findings.

Stormwater is the responsibility of the County of San Bernardino. Stormwater soaks into or runs off the subject property then into the County of San Bernardino stormwater system.

This report is intended to satisfy the requirements of a Phase I Environmental Site Audit as outlined in the ASTM E-1527 2013, ASTM 2600 -15 Standards, the EPA *"All Appropriate Inquiries"* November 2006 ruling, and the SBA May 1, 2015 Requirements.

Report Organization

This report is divided into sections which discuss the field investigation, government records search, regulatory agency contacts and recommendations. Appendices follow the text

1.1 Purpose and Scope of Work

The purpose of a Phase I Environmental Site Assessment is to discover any past or present environmentally-related events which may negatively impact the subject property. This includes a search of all available records concerning the property and the performance of an on-site inspection. Procedures followed in the performance of a Phase I Environmental Site Assessment include executing a government records search, researching permits for the site where prudent, interviewing the tenants of the subject property or neighbors in close proximity, studying aerial photographs, interviewing personnel at the appropriate regulatory agencies and conducting a physical survey of the subject property.

1.2 Involved Parties/Information Sources

This ***S & S Commercial Environmental Services, Inc.***, Phase I Environmental Site Assessment is produced through the efforts of an Environmental Professional EPA CFR Title 40 Section 312.22, working in conjunction with Federal, State and county regulatory agencies. *Environmental Research Records* maintains a comprehensive, computerized data base of pertinent, environmentally-related records, known as an *ERS Report*, which is updated on a regular basis. This data base is researched for Category I, II, III and IV sites within a mile of the subject property and a report is generated based upon the available regulatory records. The report is reviewed for sites that might impact subject property. Inquiry is directed toward sites within a 2,000 foot hazardous waste disclosure zone.

The field investigation includes a site assessment, observations of the neighboring facilities and verification of permits and building records, as necessary.

A Google search was the only Other Historical Source used (ASTM §8.3.4.9) due to the nature of the former parcel and the other information available to determine history of use.

The 2006 EPA "All Appropriate Inquires" provides for a determination by the Environmental Professional CFR Title 40 Section 312.22 as to what records are necessary to understand a subject property history and the potential for Environmental Problems. The ASTM 1527 2013 Standard provides a list of

possible sources of information for the Environmental Professional to use to determine that history.

Property tax records (ASTM §8.3.4.3) and Zoning/Land use records (ASTM §8.3.4.8) were not considered significant sources for information due to the known history of the individual parcel making up the subject property, the known current and former occupants and the building permit history. (ASTM §8.3.4.7)

Recorded land title records (ASTM §8.3.4.4) are part of a Title Report which was requested as part of the contract and is the Clients Responsibility per ASTM 1527- 2013 Standard. The new standard states in summary that in order to satisfy AAI, a user must conduct a search for the existence of environmental liens or AULs that are filed or recorded against the property.

While not provided, a Full Title Report was not deemed necessary by this Environmental Professional to evaluate the environmental status of the property based upon the information identified in the research for this report.

Definitions modified and added in the ASTM-1527 2013 Revision as approved by the EPA include:

a. Simplified Recognized Environmental Condition (REC) definition to "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment."

b. Stated a Limitation on the definition of an HREC (historical REC) to closed RECs that have been completely resolved ("clean closure") with no restrictions. Those undergoing continued maintenance or monitoring should be discussed.

Also for HREC's, if there has been a change in the regulatory criteria and if the Environmental Professional (EP) considers this past release to now be an REC at the time the Phase I ESA investigation is conducted,"... the condition shall be included in the conclusions section of the report as a REC."

c. Review of Title and Judicial Records for Environmental Liens or Activity and Use Limitations (AULs) continues to be a User (Client) requirement that is to be conducted by a Title professional, not the EP or Phase I Professional. Buyer or Lender needs to ensure that Title companies are searching judicial records.

d. (VES) Vapor Encroachment Screening under E2600-15 is a referenced document in E1527 2013 under Section 2.1. Under this Standard Vapor migration should be treated no differently than the way contaminated groundwater migration is considered in a Phase I ESA and should be discussed using the CERCLA definition of "release" and "environment" which includes vapor.

Section 2.1 of ASTM E1527 Standard - Vapor Encroachment Screening - 42 U.S.C. § 9601(22) defines a "release" as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant" This includes solid, liquid and the ensuing migration of vapor into soil and water or from water upwards through soil occupied areas.

There were no Vapor Encroachment Issues Identified on within a significant distance to the subject property. The former ammunition storage area to the east was found to be a secondary source of storage of ordnance with no work involving solvents on site and minimal off loading and loading prior to shipment to the port.

2.0 PRINCIPAL FINDINGS

2.1 Summary of Operations and Environmental Discrepancies

General Historical Operations

The subject property was agricultural or vacant land until 1941 when it became part of the Rialto Ammunition Back-Up Storage Point (Rialto Military Reservation).

The subject property was located on the southwest side of the Rialto Military Reservation west of the ammunition dump according to Final Report of Operational History 1941-195 - Rialto Ammunition Back-Up Storage Point RIALTO, CALIFORNIA Prepared for U.S. Army Corps of Engineers Los Angeles District in 2004 by Science Applications International Corporation.

The Rialto Military Reservation was subdivided over the next few years. Quitclaim Deeds from the United States of America, to buyers "Subject to easements and rights of way now existing or reserved; and subject, also, to a reservation of all structures, fences, railways, trackage, electrical and telephone systems, and other improvements constructed or erected by the United States, together with the right to remove such structures, fences, railway trackage, electrical and telephone systems, and other such improvements."

The 1953 Historical Aerial Photograph in the appendix shows a house to the north of the southwest side of the subject property with vacant land around the subject property and a second residence further north. No other operations were noted.

Current Operations

The subject property is a vacant parcel with a few piles of construction and domestic debris. There are no regulated materials used or generated on site.

Neighboring Properties
North is a vacant parcel with concrete pad from a former single family home and then a single family home.

East is open land with high voltage SCE Electrical Towers running north to south.

Former Operations To The East Of The Subject Property (1941 - 1945)
The subject property was on the western border of the "...Rialto Ammunition Back-Up Storage Point [which] served as an inspection and storage facility for ordnance-loaded railcars until they were dispatched to Victory Pier at the Los Angeles Port of Embarkation, where ordnance was loaded onto ships sailing for the China-Burma-India Theater of War (83). Storage of ordnance-loaded railcars at the Rialto Ammunition Back-Up Storage Point enabled the number of ordnance-loaded railcars at Victory Pier to be kept to a minimum..".

West is N. Sierra Avenue then vacant land.

South is vacant land.

There were no operations indicated currently on or off-site which would be related to environmental discrepancies.

2.2 Summary of Building Materials and Environmental Discrepancies

Building Materials - The subject property has always been vacant undeveloped land.

The following section regarding asbestos and Pcb describes the current status of asbestos and Pcb for any future construction.

2.2.1 Asbestos

Background - Asbestos is a natural occurring mineral fiber utilized in a multitude of building material products due to its high tensile strength and excellent fire resistant properties. The *EPA* has defined asbestos-containing materials as being either *friable* or *non-friable* materials. *Friable* material is defined as being easily broken or crushed by hand pressure (e.g., soft acoustical ceilings or blown-on fireproofing).

Non-friable asbestos is generally found in pre-manufactured products that bind the asbestos in an adhesive material, such as roofing felts, floor tile, transite pipe and mastics. This is significant, due to the ability to create a fiber release and cause human exposure during normal activities. The *EPA* currently does not require the removal of asbestos-containing materials that do not present a problem for human exposure. Most *friable* asbestos-containing materials were banned in building materials by 1978 with stocks on shelves allowed to be sold until 1980.
In October 1995, a new *FED-OSHA* ruling became effective which redefined building materials perceived as asbestos-containing into four classes of work and modified the ay in which these asbestos-containing materials are handled.

Under this ruling, "thermal system insulation and sprayed-on or troweled on or otherwise applied surfacing materials installed before 1980 are considered PACM (presumed asbestos-containing material)" unless sampled and identified by a certified individual as to asbestos content. These materials are considered high risk for abatement and their removal is classified under Class I removal activities.

Other building materials such as "floor or ceiling tiles, siding, roofing, transite panels [floor sheeting, floor or roof mastics] are also considered PACM (presumed asbestos-containing material)" unless sampled and identified by a certified individual as to asbestos content but are considered low risk materials for abatement and their removal is classified under Class II, III and IV removal and repair and maintenance operations.

Significant under these new regulations is the deletion of the category of "Small Scale Short Term Duration" removal activities which regularly allowed Class I, II, III and IV activities to proceed with less regulatory oversight.

In July 1996, *CAL-OSHA* adopted the *FED-OSHA* guidelines as part of California law subject to some of the more stringent requirements pre-existing in California under Prop 65, the Conelly Bill and various other requirements or legislation passed by the California legislature.

Under the *NESHAPS* laws of 1976 and as later amended, asbestos does not have to be removed from a facility until such time as it undergoes major renovations or is demolished. Until that time, the present emphasis by the *EPA* is to recommend repair of any damaged areas and management of the asbestos-containing materials.

Prior to any renovation work being done involving asbestos-containing materials of 260 linear feet or 160 square feet in area, the local branch of the *EPA* must be notified.

Prior to the demolition of any building or house, mandatory bulk sampling must be accomplished and, if asbestos is present, notification must be made to the local branch of the *EPA* and *Air Quality Management District*.

In California, for the removal of any asbestos-containing materials greater than 0.1% by weight, notifications must also be made to *CAL-OSHA* and a licensed contractor with an asbestos certification is required for any work which exceeds 100 square feet.

2.2.2 Building Materials Presumed to Contain Friable Asbestos

Friable asbestos-containing building materials were banned for manufacture and sale in the United States in 1978 and all stocks remaining on the shelves are presumed to have been used up by 1980. There are no buildings and no friable asbestos on the subject property.

2.2.1.2 Building Materials Presumed to Contain Non-Friable Asbestos
Asbestos was never banned from use in building materials such as floor tile, cement-based products and roofing materials, as these materials were considered *non-friable* by the *EPA* and not potentially a great hazard. After *friable* asbestos was banned, significant labeling requirements went into effect for the *non-friable* asbestos-containing materials and many substitutes became available. Asbestos-containing flooring materials and mastic were used less and less in construction after 1978 and, by 1984, their use in buildings constructed in the United States was nearly non-existent due to the labeling requirements and potential liability to both the manufacturer and real estate developer. Building materials presumed to contain *non-friable* asbestos are as follows:

Floor Tiles - There are no floor tiles on the subject property presumed to contain *non-friable* asbestos.

Roofing Material - There is no roof and no presumed *non-friable* asbestos.

2.2.2 Radon
The real property at the Northeast Corner of N Sierra Avenue and W Casa Grande Drive Fontana, CA in a Radon Zone "2" and no Radon Exposure Issues are expected.

EPA Radon Zone: 2 (Predicted avg for county: 2 to 4 pCi/L)

(Predicted avg for county: 2 to 4 pCi/L)For zip code 92336:
Number of tests per zip code: 3
Number of tests where radon is > 4 pCi/L: 0
Percentage of test where radon is > 4 pCi/L: 0.00%

2.2.3. Lead Paint
Paint containing more than 0.06% (by weight of dried product) lead was banned for residential use in the United States in 1978 by the U.S. Consumer Product Safety Commission (16 Code of Federal Regulations CFR 1303).

There are no structure and no lead paint is expected.

2.2.4. PCB Poly Chlorinated Bi Phenyl
Pursuant to 40 CFR 761.2(a)(2), mineral oil-filled transformers which were manufactured prior to July 2. 1979, whose PCB concentration is unknown, and mineral oil-filled transformers whose date of manufacture is unknown, must be assumed to be PCB contaminated containing > 50 ppm PCBs, but < 500 ppm PCBs.

All pole-top and pad mounted distribution transformers manufactured before July 2. 1979, must be assumed to be mineral-oil filled containing Pcb. Pcb was outlawed for use in Transformers and Florescent Light

Fixture ballasts in 1978/79. There are no florescent light fixtures on the subject property and no pcb.

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Southern California Edison (SCE) supplies power to Fontana, CA. SCE has replaced any pcb in existing transformers in their system or never specified their use.

2.2.5. Lead In Drinking Water

A prohibition on lead in plumbing materials has been in effect since 1986. As there are no buildings, lead in valves is not suspected on the subject property.

2.2.6. Mold

Mold results from rainwater intrusion and from leaking plumbing pipes. Mold was not seen and is not an issue.

2.2.7 Flood Plain

Panel: 06071C7920H, Effective Date: 8/28/2008
Zone X - Area of minimal flood hazard, usually depicted on FIRMs as above the 500- year flood level.

2.2.8. Wetlands

The subject property is not part of any National Wetlands Inventory and no Wetlands were noted on the subject property during the site inspection.

2.2.9. Indoor Air Quality - Subjective

No unsatisfactory indoor air quality was identified via Olfaction (smell) in occupied areas and areas of ceiling damage. There were no areas identified in this research of concern for Unsatisfactory Indoor Air Quality from chemicals, gases or regulated materials being used on or off site, present from past activities or building materials used in construction of the building complex.

2.2.10 Condition of Onsite & Surrounding Vegetation

The onsite and surrounding vegetation were brown from lack of water only and not stressed by corrosive chemicals or chemicals.

2.2.11 Underground Tanks

There were no underground tanks or vessels noted on or adjoining the subject property or in a significant distance of the subject property.

22. 12 (VES) Vapor Encroachment Screening

Vapor Encroachment Screening did not identify any potential sources of vapor contamination on the subject property or in the EPA 100 foot Vapor Encroachment Zone. See Appendix Section 12.9.

3.0 SITE OVERVIEW

3.1 Location

The subject property is located on the northeast corner of N. Sierra Avenue and West Casa Grande Drive, north of the 210 Foothill Freeway and east of Citrus Avenue in the City of Fontana located in San Bernardino County California.

The land use in the general area is Vacant land, commercial, recreational and residential.

3.2 Adjacent Properties

North is vacant land which was the site of a former residential home, vacant land and then an occupied residential home.

East is vacant land owned by SCE then single family homes.

South is vacant land then light industrial and distribution.

West is N Sierra Avenue then vacant land.

There were no operations indicated currently on or off-site which would be related to environmental discrepancies for the subject property.

There were no current emissions noted from any of the adjacent or adjoining properties during the site inspection which would be of concern for the subject property.

3.3 Site Description

The subject property is a rectangular shaped property approximately 5.5 acres in area stretching from N. Sierra Avenue on the west to an SCE High Voltage Tower property strip on the east.

There are a few surveyor stakes, some piles of rock, asphalt and construction and domestic debris in a few areas. Most of the property is rock and dirt with some scrub brush. The property is accessible on the south and east sides as dirt roads operated by SCE for access to their High Voltage Towers.

There was nothing of significance environmentally.

4.0 SITE HISTORY AND OPERATIONS

4.1 Building Permit History

No building permits were identified for the subject property.

4.2 Operations

Former Operations - The subject property was vacant then vacant land on the south western edge of a military reservation from 1941 to 1945 then vacant land.

The history of the Rialto Military Reservation from the Science Applications International Corporation 2004 Report are as follows:

- 31 December 1941-9 February 1942: acquisition of2814.55 acres of land near Rialto (southwestern edge N. Sierra Avenue and location of subject property)
- February 1942, onwards: improvements made to construct the igloo storage area, classification yard, and administration buildings.
- 16 November 1942: Rialto Ammunition Back-Up Storage Point is activated.
- 2 December 1942: operations begin with the first railcar received.
- January to August 1943: storage of small arms ammunition in the igloos for DTC operations in the Mojave Desert.
- May 1944: 220 railcar holding area constructed.
- 30 November 1944: 7 .6 acres acquired as a no-fee easement for railroad spur.
- September 1945: operations cease.
- 16 October 1945: Rialto Ammunition Back-Up Storage Point put on "caretaker" status.
- 13 November 1945: Rialto Ammunition Back-Up Storage Point declared surplus by the Army Service Forces and transferred to the War Assets Administration for disposal.
- 9 July 1946: the Farm Credit Administration assumed custody and responsibility for disposal of the land and improvements.

There was no indication that any waste was discharged into a private sewer.

Current Operations - The property remains vacant undeveloped property. There were no uses identified using regulated materials.

4.3 Operational Permits, Manifests and Material Safety Data Sheets (MSDS)

EPA ID Number - An *EPA* ID number identifies a facility to the State and Federal governments as a hazardous waste generator. There is no record of waste being removed from the subject property and no RCRA numbers.

Hazardous Waste Manifests - A hazardous waste manifest file is maintained when hazardous materials are transported and disposed of from a site. There are no regulated materials being used on the subject property and no manifests for this report.

Air Emissions - The *South Coast Air Quality Management District* issues permits for sites that are emitting hazardous waste into the atmosphere from their operations. According to Find there is no record of permits for the subject property.

Material Safety Data Sheets (MSDS) - Material Safety Data Sheets are required for chemicals and products being used in businesses which may be of a hazardous nature. There are no regulated materials being used on the on the subject property and no MSDS for this report.

5.0 ENVIRONMENTAL SETTING

5.1 Regional Physiographic -

The subject property is at an elevation of around 1754 feet above sea level, according to the Devore 7.5 minute US Geological Survey Map section in the appendix.

The surficial alluvium underlying the site is composed of alluvial fan deposits derived from basement rocks of the San Gabriel Mountains. The thinner upper layer (200+ feet) consists of undifferentiated younger alluvium, overlying a thicker sequence (1,100+ feet) of older semi-consolidated sediments (*DWR*, 1970).

The site is located in a seismically active region with active faults within 30 miles: San Andreas, San Jacinto, Cucamonga, Glen Helen and Whittier-Elsinore fault zones. The San Jacinto fault and Cucamonga fault zones are within three miles of the site. No active or potentially active faults have been identified on the site

Rocks beneath the surficial alluvium are comprised of semi-consolidated terrace deposits, underlain by a thick sequence (2,000+ feet) of folded and faulted sedimentary rocks known as the San Timoteo beds. Beneath the San Timoteo formation is a series of well-stratified beds of marine sandstones, shales, conglomerates and lava flows that reach a thickness of 24,000 feet in the extreme western portion of the Chino Basin. The basement rocks underlying the basin structure are a complex of crystalline metamorphic and plutonic rocks of granitic composition (*DWR*, 1970).

Hydrogeology -

The hydrogeology of the site is complex and incompletely characterized. Depth to groundwater at the site is about 300 feet below ground surface, and flow is to the south and southeast. The site lies within the Upper Santa Ana River Watershed in the Rialto-Colton groundwater basin. Horizontal groundwater flow from the basin is impeded by the San Jacinto Fault which separates the basin on the northeast from the Lytle and Bunker Hill Basins, and on the northwest, southeast, and southwest by groundwater barriers which have been identified from large groundwater elevation differences historically measured in groundwater production wells.

5.2 Soil Conditions

Soil at the site is typical of alluvial fans and terraces with surface soil and subsoil mostly sandy silty clay, with gravel washed from Lytle Creek with no significant uses identified in the property history. There are no wetland issues.

There were no contours, mounds or anomalous conditions to indicate the disposal of regulated materials on-site.

There were no operations noted on the subject property past or present which would indicate contamination.

Soil Type: (USDA Soil Survey Geographic Database) (SSURGO)
Soboba gravelly loamy sand, 0 to 9 percent slopes
Map Unit Type: Consociation, Hydric: No
Drainage Class: Excessively drained
General Information: Sandy-skeletal, mixed, thermic Typic Xerofluvents

5.3 Groundwater Conditions

Groundwater is expected around 300 feet. No groundwater testing was included in this report. There does not appear to have been any operations on or adjacent to the subject property which would indicate problems.

6.0 RESULTS OF INVESTIGATION

6.1 Site Inspection Observations

The subject property is a vacant parcel with sand, gravel, some vegetation and dirt. There was nothing significant environmentally to indicate problems with the subject or surrounding properties.

6.2 Regulatory Agency Contacts

6.2.1 Fontana Water Company

The Fontana Water Company was previously contacted concerning the water depth and supply in the area. It was found that the first potable water is at about 600 feet, the first depth from which they draw water from their wells. Mr. Carlos Simbres of the Fontana Water Company said that the water to be supplied to the subject property comes primarily from three different areas: Lake Silverwood via the California Aqueduct, groundwater wells and canyon water sources. He said that this water is blended with Metropolitan Water District water due to the high nitrate content.

Mr. Simbres stated that the Fontana Water Company tests all wells on a regular basis to assure conformance with Title 22 regulations to make sure that all water supplied to end users meets the State of California's drinking water quality standards.

6.2.2 California Department of Conservation, Div of Mines and Geology

The *California Department of Conservation, Division of Mines and Geology,* was contacted regarding the proximity of active earthquake faults. The subject property is not part of any special studies zone pursuant to the Alquist-Priolo Earthquake Fault Zones Act of 1972, which mandated studies of active faults in California. An active fault zone is described by the *State Mining and Geology Board* "as one which had surface displacement within the Holocene time (about the last 11,000 years)."

6.2.3 California Division of Oil and Gas

A review of the *State of California Division of Oil and Gas* Maps did not indicate that oil wells were drilled within a mile of the subject property. It does not appear that any wells were surface-drilled into the subject property. (See DOGGR map section in appendix)

6.2.4 Southern California Edison Company

Mr. Don Garza, Service Planner, was previously contacted concerning Pcb oil in pole and pad-mounted transformers in the area. He said that it is unlikely that any Pcb are present in the transformers, as they were never specified. He stated that *Southern California Edison* would be happy to test any transformers for a fee.

6.2.5 South Coast Air Quality Management District (SCAQMD)

Find was researched regarding air emission permits on the property. There were no permits or applications identified for the subject property.

6.2.6 Department of Health Services, State Department of Radon

Mr. David Quinton, Environmental Health Specialist with the *State Department of Radon*, was contacted regarding the presence of radon in the area. He said that the most recent studies done predicted less than 2.4% of homes and less than 0.04% of the schools in the State of California would be over the *EPA's* action level of four picocuries/liter. He stated that this study was performed in existing homes and that there was no effective methodology of correlating soil samples to houses. Mr. Quinton explained that much is dependant upon the soil under a residence and the type of foundation a house is built upon. Additionally, the standard is based upon exposure of 18 hours per day for 70 years, which would not correlate to a business exposure. Mr. Quinton said that, with the exception of Madera County in Northern California, the *State of California* has nearly concluded all radon testing in the State and has found that there is little likelihood of a significant radon exposure in California.

Mr. Quinton said that business exposures had not been within the parameters of any of these studies due to the limited time most business people are in one location. He also said that the State does not plan to study businesses based upon the previous studies and that there is no standard for a commercial enterprise being conducted outside of a home.

EPA Radon Zone: 2

(Predicted avg for county: 2 to 4 pCi/L).

6.2.5 San Bernardino County Assessor Records, Orange Coast Title

The subject property was re-surveyed in 1975 and divided into separate parcels. The subject property was transferred to Bello Construction sometime in the 1980's from what appeared to be Steven E. Riddle. Bello Construction transferred property to Cecilia Bello in 1995 and ownership continued under different spousal trusts.

No problems were identified for the subject property as to former users or operators of the subject property.

6.2.6 Fontana Building Department

No records of residential properties in the 1940's or 1950's are available.

6.3 Personal Interviews, Site Records Review

6.3.1 Personal Interviews

The subject property is vacant and no interviews were deemed necessary based upon the research.

6.3.2 Site Records Review

The subject property is vacant. There were no records to review.

6.4 Historical Aerial Photograph Review & Sanborn Fire Insurance Map

Available Sanborn Fire Insurance Maps and Aerial photographs and topographic map from 1938, 1959, 1966, 1995, 2003, 200, 2007, 2012, 2014 and 2016 along with a 1966 USGS Aerial Topo were reviewed. Photographs, Sanborn Fire Insurance Maps and topographic maps in an aerial review are specifically examined for evidence of hazardous materials, as well as on and off-site features that may affect the environmental quality of the property. These features include sumps, pits, ponds, lagoons, aboveground tanks, landfills, outside storage of hazardous materials and general land use. None of those items appeared to be on or immediately adjacent to the subject property in a manner which would be of long term concern for the subject property.

Sanborn Fire Insurance Maps - There were no Sanborn Fire Insurance Maps for this report.

Photo Dated 1938 - The parcel is vacant land with agricultural land to the west, east north and south. There is a large structure on the west side of N Sierra Avenue further northwest.

Photo Dated 1959 - There is now a house on the property, a house on the north and a house further north. There are no other significant changes around the subject property.

Photo Dated 1966 - There are no significant changes to the subject property or surrounding properties.

Photo Dated 1995 - The structures are gone from the subject property. There are no significant changes to the surrounding properties. Residential properties are being constructed further east.

Photo Dated 2003 - There are no significant changes to the subject or surrounding properties. Residential properties are being constructed further east.

Photo Dated 2006 - The building appears to be gone from the property north of the subject property leaving only a foundation. There are no other significant changes in the area.

Photo Dated 2007 - There are no changes to the subject property. There are no other significant changes in the area.

Photo Dated 2012 - There are no changes to the subject property. There are no other significant changes in the area.

Photo Dated 2013 - There are no significant other changes to the subject property or surrounding properties.

Photo Dated 2016 - There are no significant changes to the subject property or surrounding properties.

Copies of sections of selected historical aerial photographs along with a topographic map are in the Appendix.

6.5 Synopsis of Previous Environmental Investigations

There were no prior Environmental Investigations identified or provided by the client.

CAL- EPA online information regarding possible problem properties in the area of the subject property was reviewed. No problems were identified for the subject property. (See appendix)

6.6 Summary of Government Records Search (Refer to Government Lists)

NOTE: This government records summary is based, in part, on investigating critical, or "border zone", properties near the subject property. The *State of California, Department of Health Services*, has defined these sites as being within 2,000 feet (or approximately 0.4 mile) of the subject property. Other sites more distant in proximity may be listed but not considered critical and, therefore, not further investigated.

The following is a summarized form of the detail provided in the Environmental Records Search (ERS) Report in the Appendix.

CATEGORY ONE: NPL, SPL, RCRA-TSD, RCRA-CORRACTS, SWLF, SCL, CERCLIS/NFRAP, TRIBAL LAND SITES

This category is composed of lists compiled by the *US Environmental Protection Agency* and the State of California Equivalency lists. This category includes National Priority List sites, RCRA Corrective Actions by the *EPA* and *USEPA* permitted treatment, permitted solid waste landfills, incinerator sites or transfer stations, storage and disposal facilities within a one mile radius of the subject property. This includes sites for designation under the Federal SUPERFUND Program an the State Bond Program for sites representing an environmental

concern for the discharge of hazardous wastes.

There is one Category One site listed as being within one mile of the subject property as of the date of this report. That site is nearly a mile northeast and not considered a problem for the subject property.

CATEGORY TWO:(½ mile) **LUST, DEED RSTR, TOXIC PITS, CORTESE**
The sites within this category include sites selected for possible placement on the Federal NPL list or the State risks to human health and the environment. This category also includes leaking underground tank sites from both the *Regional Water Quality Control Board* and the State mandated CORTESE lists of properties with hazardous wastes, sites with DEED restrictions and Toxic Pits Cleanup facilities. Sites within this category are provided on this list within a one-half mile as of the date of this report, with other DEED restrictions and Toxic Pits sites from 1994 and 1995.

There are no Category Two site listed involved with leaking underground tanks.

CATEGORY THREE: (1/4 mile) **RCRA VIOL, TRIS, UST/AST**
Sites in this list are the result of RCRA enforcement actions, the Toxic release inventory base, registered aboveground or underground tanks and the result of searches of any unique county data bases. The data bases range from 1994 information for underground tanks to the date of this report for information for RCRA actions and registered aboveground storage tanks.

There are no Category Three sites listed within a one-quarter mile radius of the subject property.

CATEGORY FOUR: (1/8 mile) **ERNS, GNRTR, SPILLS**
Sites in this category include ERNS, which is a national database retrieval system of Incident-Notification information as initially reported by any party regarding incidents of reported releases of oil and hazardous substances. The information in this report combines data from the *United States Coast Guard National Response Center* data base with data from the 10 *EPA* regions.

ERNS/SPILLS - ERNS/SPILLS supports the release notification requirements of Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended; Section 311 of the Clean Water Act; and Sections 300.51 and 300.65 of the National Oil and Hazardous Substances Contingency Plan. There are no ERNS/SPILLS sites listed within one-eighth mile of the subject property as of the date of this report.

RCRA - Sites which generate regulated hazardous waste above a certain quantity are required to use *EPA* identification numbers and are called RCRA sites. An *EPA* identification number does not indicate a problem with a site, but merely that they use or dispose of a minimum quantity of a hazardous waste.

There are no RCRA sites listed within a one-eighth mile radius of the subject property as of the date of this report. The subject property is not an RCRA site.

7.0 DISCUSSION OF INVESTIGATION

Asbestos 1527-13 Section 13.1.5.1 **De Minimis Condition**
Building Materials Presumed to Contain Friable Asbestos
None.

Building Materials Presumed to Contain Non-Friable Asbestos
None.

Pcb 1527-13 Section 9.4.1.10 Poly-Chlorinated Biphenyl (Pcb) - **De Minimis Condition**
There should not be any pcb in any of the utility transformers on or near the site, according to *Southern California Edison* the electrical supplier to the area.

There are no suspected PCB-containing florescent light ballasts.

Aboveground Storage Tanks 1527-13 - The physical site survey did not evidence the existence of aboveground storage tanks currently or formerly on the subject.

Underground Storage Tanks 1527-13 Section 9.4.1.3 9.4.1.4 & .5 - The physical site survey did not evidence current or former underground tanks.

Air Emissions - There are no regulated air emissions from the subject property.

Water Supplies 1527-13 Section 9.4.1.9 - Former discussions with the Fontana Water Company and a review of their web site evidenced a water supply to the area which meets all of California's drinking water requirements.

Wastewater 1527-13 Section 9.4.1.10 & 9.4.4.7 - The subject property is expected to have had a septic tank and seepage system with only domestic waste disposed of. No problems are expected.

Waste Generation, Storage and Disposal 1527-13 Section 9.4.1.4.4 & .5 & .6 & .7 - The physical site survey did not evidence the current or former generation, storage or disposal of regulated hazardous waste on the subject property.

Pesticides, Herbicides, Stressed Vegetation 1527 9.4.4.3 - There was no current use of herbicides or pesticides noted beyond the normal residential and commercial insect and pest control.

Wells - Oil, Water, Injection, Irrigation, Abandoned 1527-13- 9.4.4.6 - There were no wells of any type seen on site nor were any identified adjoining the subject property

Radon - Radon comes from the natural breakdown (radioactive decay) of uranium. The *Environmental Protection Agency* (*EPA*) estimates that the average soil in the United States contains only about one part per million of uranium. Uranium is found in about 150

minerals including granite, phosphate and shale. Granite is a major concern for the presence of radon, as some deposits have been found to contain extremely high levels of uranium. The area of the subject property does not indicate any large deposits of granite material which would be of concern to test for the presence of radon. Phosphorous is an essential ingredient in chemical fertilizers and comes from phosphate rock. There does not appear to ever have been much fertilizer used around the subject property. According to Mr. David Quinton of the *State Department of Radon*, the chance of radon being a hazard in the State of California is very low. Actual testing for radon content was not conducted and is not included in the scope of this report.

Lead-Based Paint - Specific testing is required to determine if paint or other materials used in the construction of the building on the site contains significant levels of lead. These tests are not within the scope of work for this report and no investigation for lead content was, or will be, performed unless agreed to by the property owner as an additional service, incurring additional costs. There are no structures and no lead paint issues.

Vapor ASTM 2600 Section 10 - There were no sources of vapor from soil or groundwater identified. (See 12.10) Tier I Vapor Encroachment Screening (VES)

Regulatory Actions - There were no regulatory actions noted in the records reviewed regarding the subject property.

Known Site Problems - There are no known site problems.

Regional or Adjacent Problems - There are no regional problems.

8.0 CONCLUSIONS

8.1 Areas of No Apparent Concern

There are no areas of concern regarding the current or former operations on-site. The subject property was on the western edge of the Rialto Military Reservation and there was no temporary storage of munitions or ordnance on site noted in the research.

8.2 Areas of Further Concern

The record research and physical site survey did not identify any areas of further concern regarding Recognized Environmental Concerns for the subject property.

9.0 RECOMMENDATIONS

9.1 Areas of No Action

There are no recommended areas of action at this time.

9.2 Further Investigation

In this Environmental Professional's Opinion, the likelihood of contamination is so remote that no further investigation is recommended.

9.3 **Performance Statement 1527 13 12.8.1**- We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527 - 2013 of APN 0239 -151- 40 on the Northeast Corner of N Sierra Avenue and W Casa Grande Drive Fontana, CA 92336. Any exceptions to, or deletions from, this practice are described in Section 1 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property.

10.0 LIMITATIONS

This report is intended to satisfy the requirements of a Preliminary Phase I Environmental Site Audit as outlined in the ASTM-1527 2013 Guidelines and the 2006 EPA All Appropriate Inquiries" Standard. These standards are intended to define the scope of due diligence necessary in a real estate transaction to provide for the "innocent buyer's defense" under the SARA amendments to CERCLA.

The findings set forth in this Phase I Environmental Site Assessment are strictly limited in time and scope to the date of evaluation(s). Government records searched are limited to the accuracy of the agency prepared lists. The conclusions presented in the report are based solely on the services described therein and not on scientific tasks or procedures beyond the scope of the agreed upon Phase I Environmental Site Assessment. It is hereby acknowledged that, within the scope of this survey, no level of assessment can ensure the real property is completely free of chemicals or toxic substances.

This public records search was conducted with available Federal, State, County and City agency departments, according to recognized procedures and current availability of records. Conclusions resulting from these searches are solely a result of the same. ***S & S Commercial Environmental Services, Inc.,*** assumes no responsibility for events that are not part of these public records. This report is intended for those in privity of contract and any current lender. This report is not transferrable without written authorization. This report is not intended to be used by any other person or entity now or in the future.

S&S Commercial Environmental Services, Inc.



Stephen A Quartararo, CEO
Environmental Professional
Title 40, Code of Federal
Regulations CFR Part 312.22

11.0 REFERENCES

11.1 Published References

11.1.1 Environmental Data Resources ERS Report - January 2018

11.1.2 Aerial Photograph Review -, USGS http://earth.google.com/ http://www.terraserverusa.com/ Historical Aerials.com/

11.1.3 Topographic Maps - *USGS*

11.1.4 *DOG* Maps Map Book Division of Oil & Gas ftp://ftp.consrv.ca.gov/pub/oil/maps/dist2/w2-1/Mapw2-1.pdf

11.1.5 Alquist-Priolo Earthquake Fault Rupture Hazard Special Study Zones

11.1.6 California Code of Regulations Title 22 Chapter 30, Regulations for Hazardous Waste Transport and Disposal, *California Highway Patrol*

11.1.7 FEDERAL, 29 CFR, Part 1910.120; 40 CFR Part 761, DOT; 49 CFR Parts 172.516; Toxic Substance Control Act

11.1.8 http://www.lapl.org/ Los Angeles Public Library Sanborn Fire Insurance Map Collection

11.1.9 CAL EPA Envirostor With Links To Regional Water Quality Control Board http://www.envirostor.dtsc.ca.gov/public/

11.1.10 http://www.aswater.com/Organization/Company_Links/SCWC/scwc.html

11.1.11 http://oaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility?

11.1.12 http://www.epa.gov/swerosps/bf/aai/aai_final_factsheet.htm
All Appropriate Inquiries Final Rule

WHAT IS "ALL APPROPRIATE INQUIRIES?"
"All appropriate inquiries" is the process of evaluating a property's environmental conditions and assessing potential liability for any contamination.

WHY IS EPA ESTABLISHING STANDARDS FOR CONDUCTING ALL APPROPRIATE INQUIRIES?
The 2002 Brownfields Amendments to CERCLA require EPA to promulgate regulations establishing standards and practices for conducting all appropriate inquiries.

11.1.12 Internet Research http://www.google.com

11.2 Record of Personal Communications

11.2.1	California Division of Mines and Geology Ms. Venice Huffman	January 2018 (213)620-3560
11.2.2	California Division of Oil and Gas Cerritos Office	January 2018 (714)816-6847
11.2.3	Southern California Edison Company Ms. Janice Garston, Customer Service Rep.	January 2018 (909)592-3724
11.2.4	State Department of Radon Mr. David Quinton, Env. Health Specialist	February 1996 (916)324-2308

11.2 Record of Personal Communications (cont)

11.2.5 Fontana Water Company — January 2018
http://fontanawater.com/ — (909) 822-2201

11.2.6 South Coast Air Quality Management District — January 2018
Find — (909)396-2900

11.2.7 http://www.militarymuseum.org/RialtoBackUpFac.pdf
Final Report \ Operational History 1941-1945 — January 2018
Rialto Ammunition Back-Up Storage Point
RIALTO, CALIFORNIA
Prepared for
U.S. Army Corps of Engineers
Los Angeles District
Prepared by:
Science Applications International Corporation
18350 Mt. Langley Suite 210
Fountain Valley, California 92708

12.0 APPENDIX

12.1 Site Location Map

12.2 Historical Aerial Photographs & Sanborn Fire Insurance Maps

12.3 Topographic Map

12.4 Environmental Features

12.5 Building Permits

12.6 DTSC Map & Local Sites

12.7 DOGGR Map Section

12.8 SCAQMD Finds Information

12.9 City Directories

12.10 Tier I Vapor Encroachment Screening (VES)

12.11 Letter from Magnetek

12.12 Certification

12.13 Resume

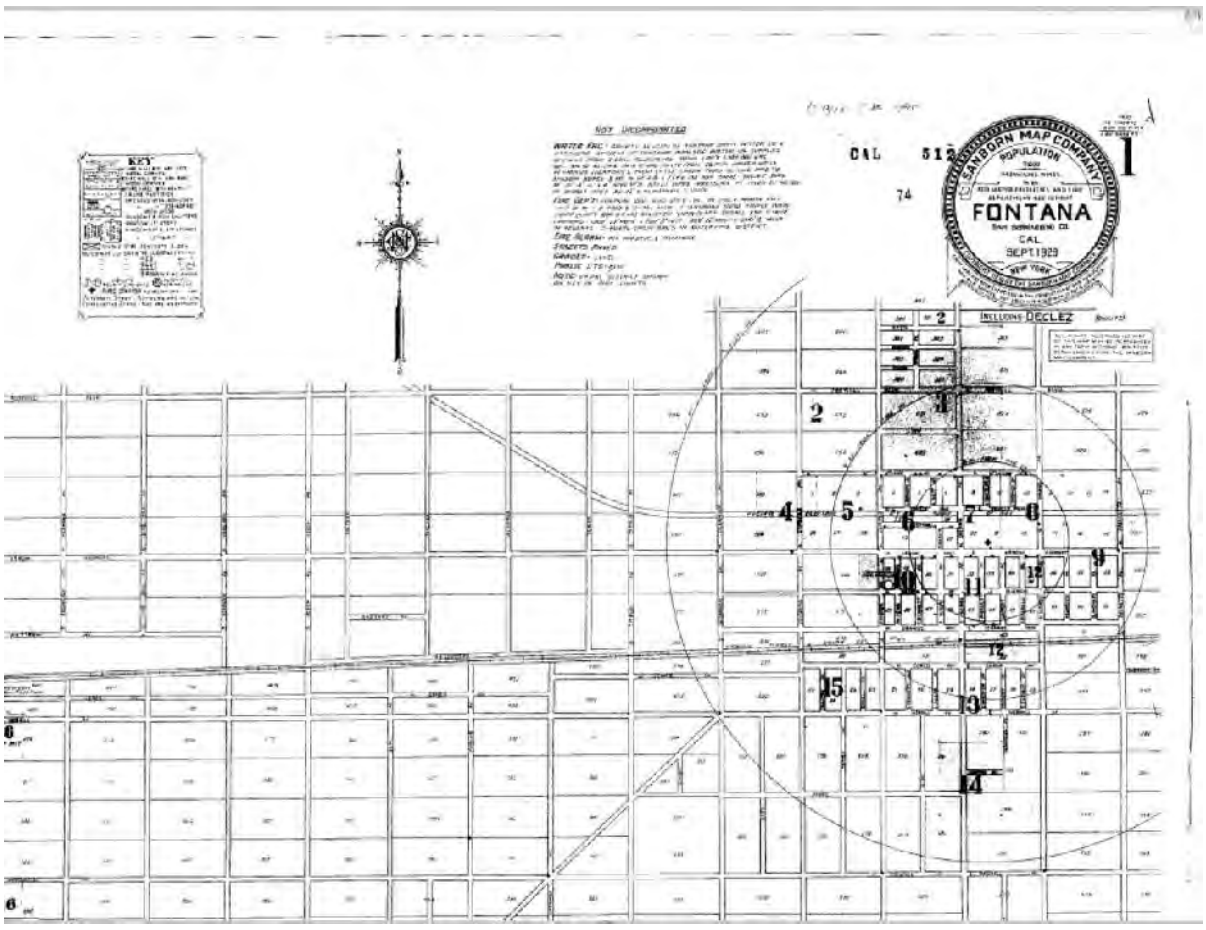
12.15 Environmental Records Search (ERS) Report

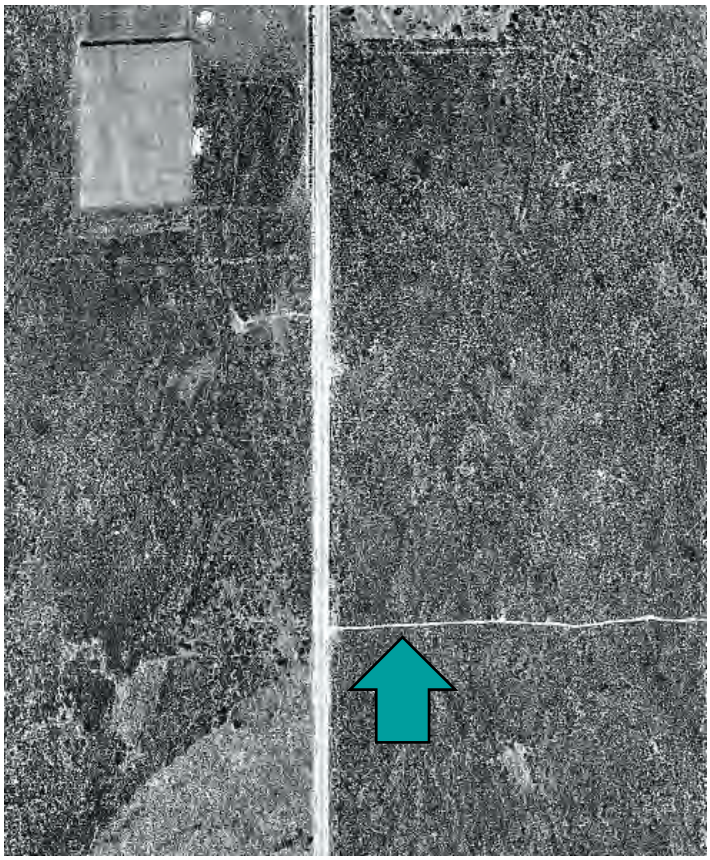
12.1 Site Location Map


119
15
N Riverside Ave
N Riverside
Linde Vista Dr
Casa Grande Dr
Casa Gran
W Summit Ave
Augusta Dr

12.2 Historical Aerial Photographs & Sanborn Fire Insurance Maps

There Are No Sanborn Fire Insurance Maps

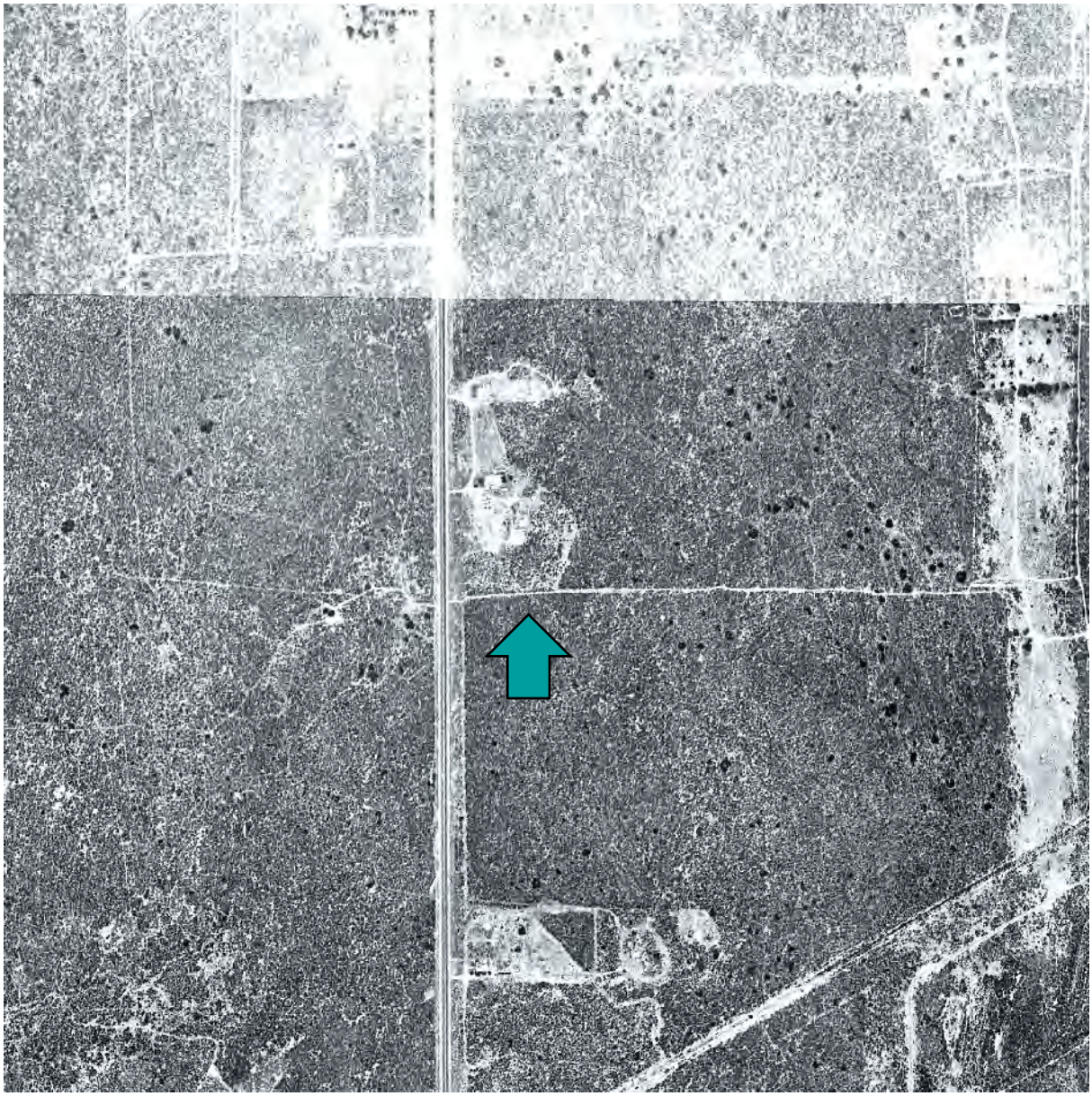

KEY
NOT INCORPORATED
CAL
74
SANBORN MAP COMPANY
POPULATION
FONTANA
CAL
SEPT 1929
INCLUDING DECLEZ



1938

1959





1966



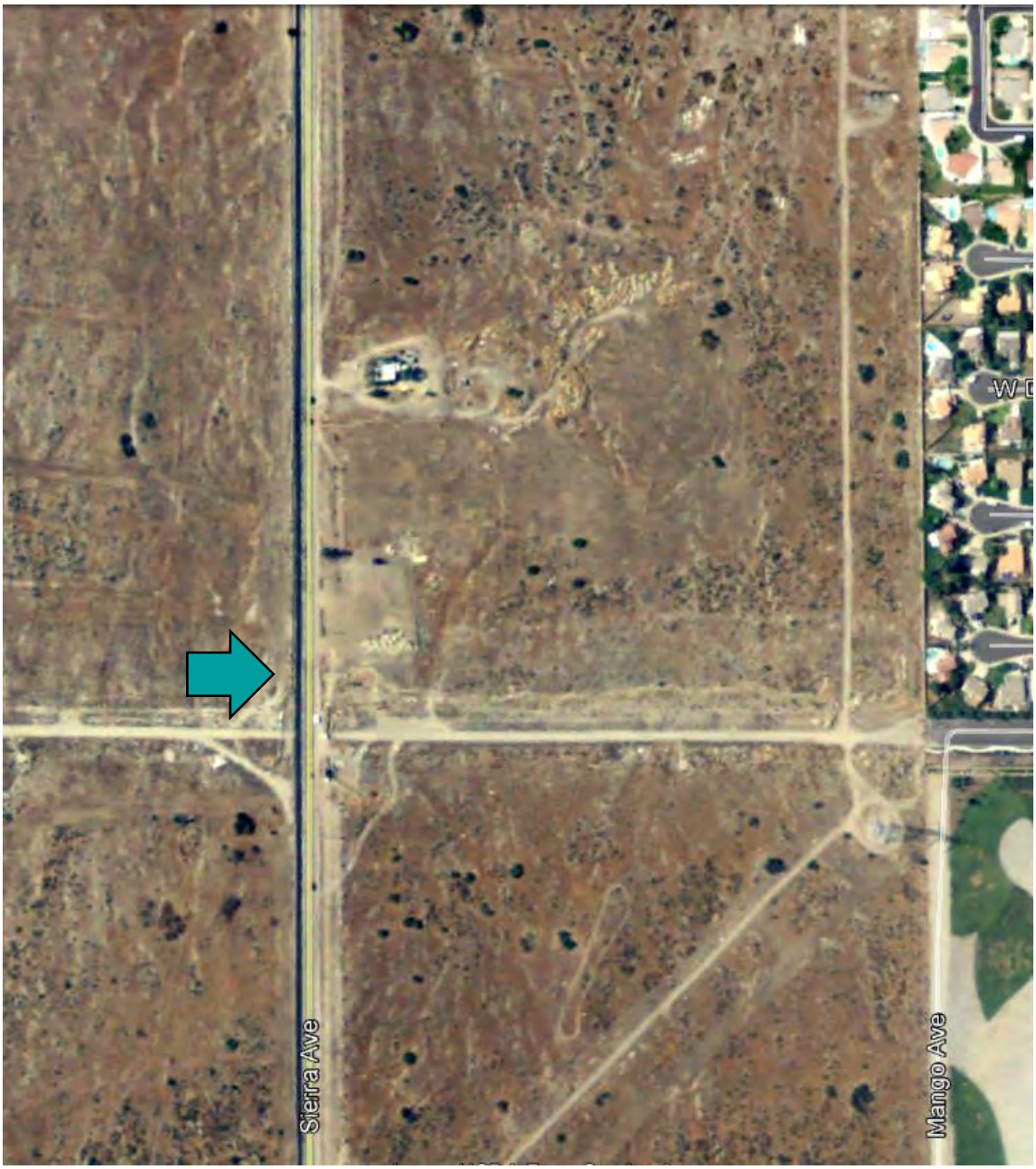
1995



2003



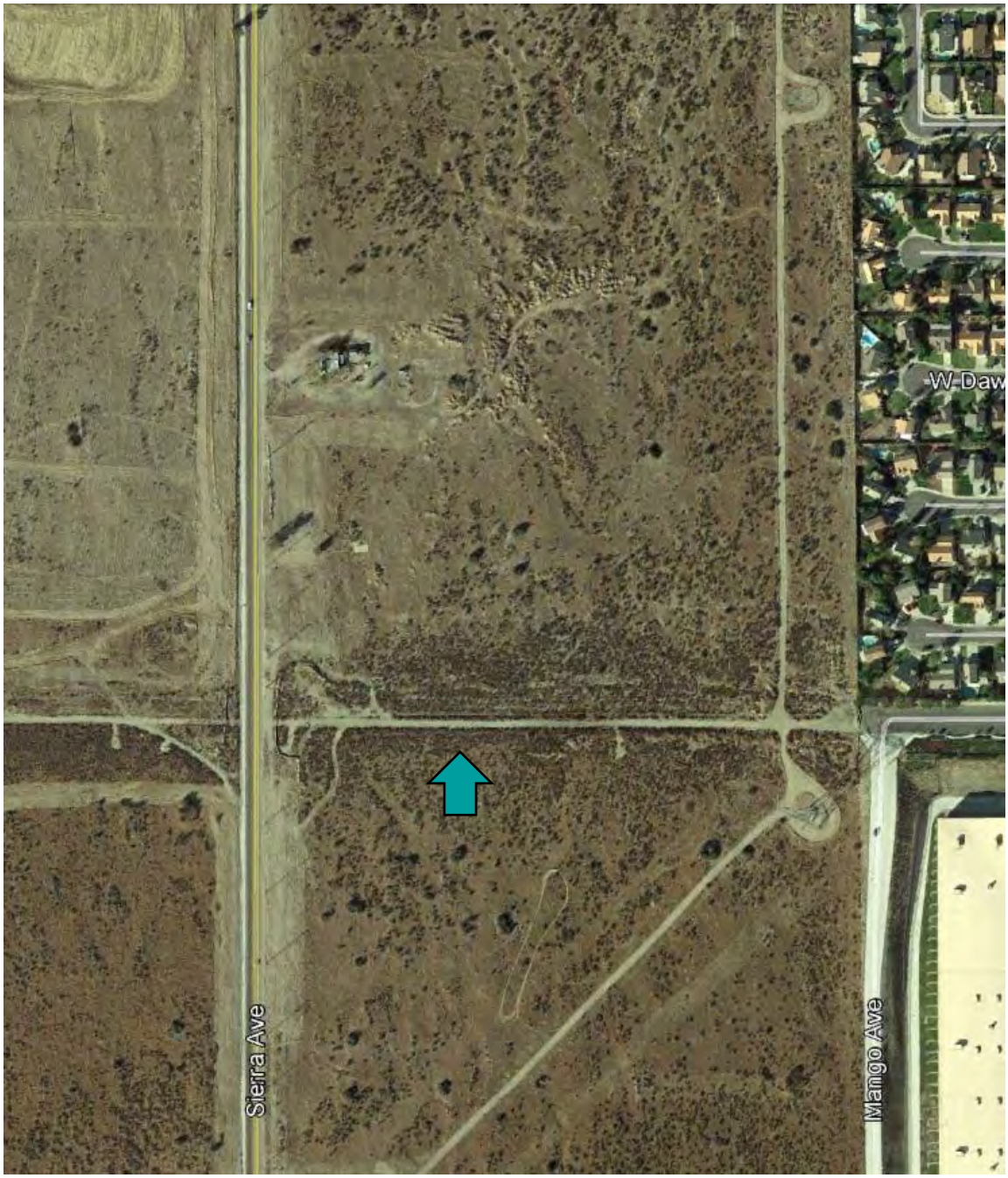
2006



2009



2012

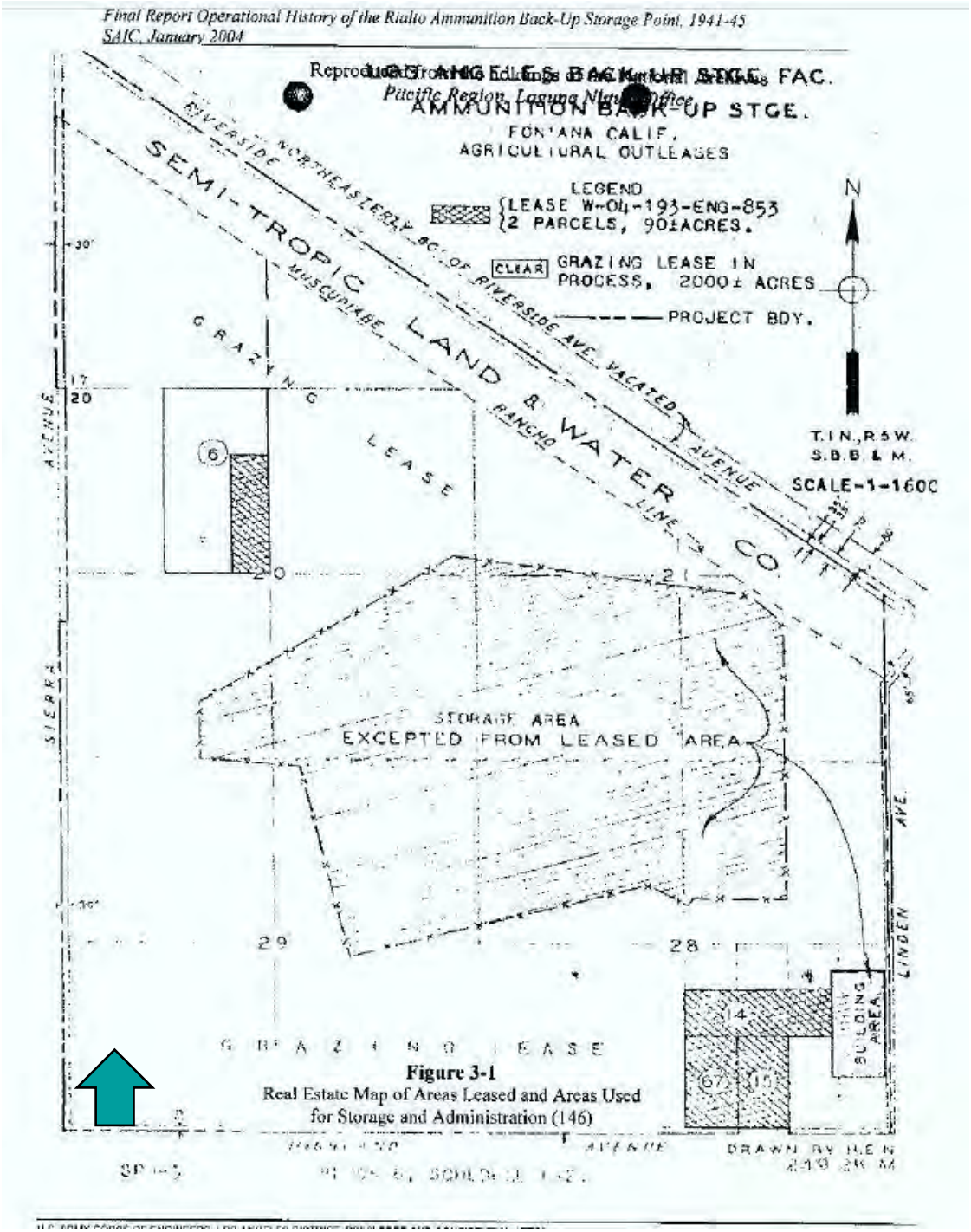


2013



2015

12.3 Topographic Map



1940's Devore 7.5 Minute USGS Topographic Map

12.4 Environmental Features



East Entry From SCE Right OF Way



Southwest Entry From N. Sierra Along W. Casa Grander



Pile OF Rocks, Asphalt And Dirt On South Side Of Property



Domestic Debris Along South Side of Property



Surveyors Stakes Along South Side of Property



Northeast To Southwest Across Subject Property



East - Vacant Land Then Single Family Residential



West - Sierra Avenue Then Vacant Land

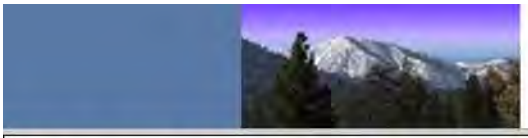


North - Vacant Land Then Single Family Residential Home



South - Vacant Land Then Newer Light Industrial Distribution Buildings

12 Building Permits



SAN BERNARDINO COUNTY
RECORDER-CLERK

Document Details

Prev Doc

Document Number:	19870432815
Document Date:	12/09/1987
Pages:	2
Document Type:	0001 - Deed - Grant
Image Available:	NOT AUTHORIZED
Book/Page:	NA / NA
Parcel Number:	NA

Grantor Names	Grantee Names
DUNLOP FAMILY TRUST	RIDDLE STEVEN E
RIDDLE MARILYN D	



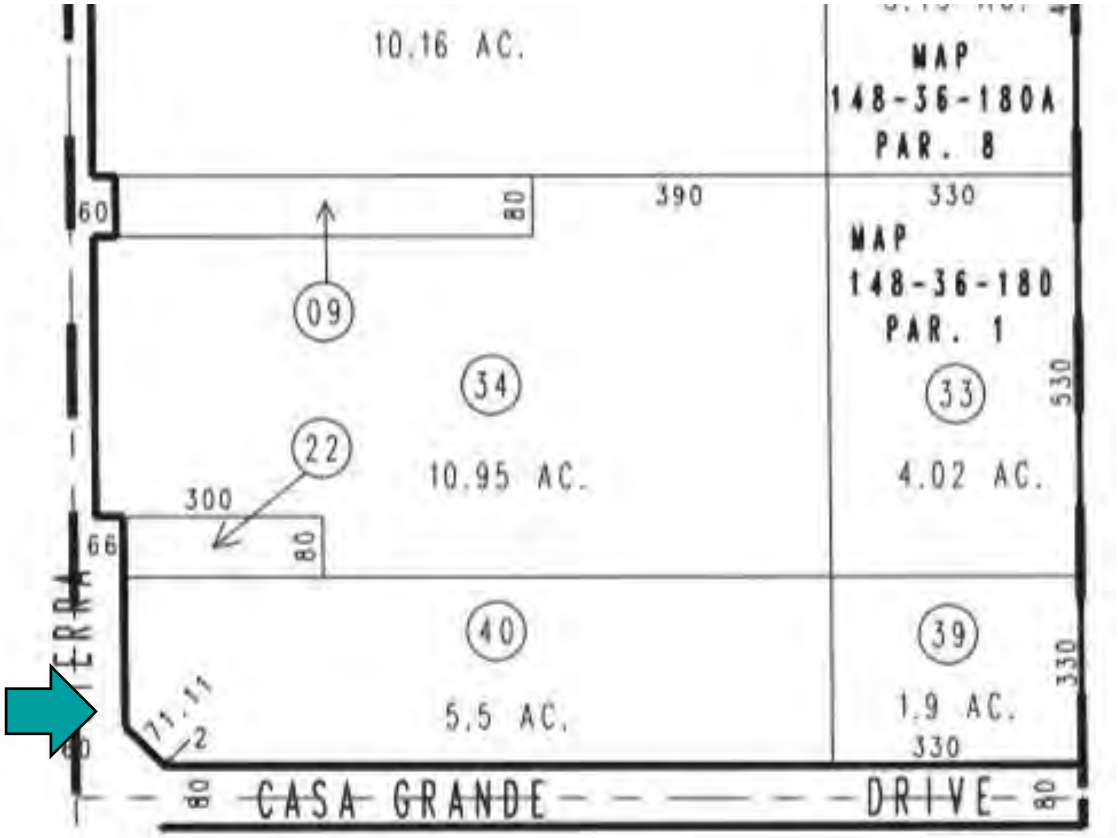
SAN BERNARDINO COUNTY
RECORDER-CLERK

Document Details

Next Doc

Document Number:	19870448458
Document Date:	12/23/1987
Pages:	1
Document Type:	0001 - Deed - Grant
Image Available:	NOT AUTHORIZED
Book/Page:	NA / NA
Parcel Number:	NA

Grantor Names	Grantee Names
BELLO CONSTRUCTION COMPANY INC	RIDDLE STEVEN E



Tax Collector » Owner History for Parcel 0239-151-40-0000

Name	Owner Status	Percent Ownership	Relationship	Document Number	Recording Date	Acquire Date	Roll Year
HOPPER, CHRISTOPHER & CECILIA TR 10-02	**Present Owner**	100%	TRUST REVOCABLE	20020595272	2002/11/04	2002/11/04	
HOPPER , CHRISTOPHER S	Past Owner	50%	SPOUSAL	9535858000000	1995/10/17	1987/12/23	
HOPPER , CECILIA B	Past Owner	50%	SPOUSAL	9535858000000	1995/10/17	1987/12/23	
BELLO , CECILIA	Past Owner	100%	SOLE OWNER	8744845900000	1987/12/23		
RIDDLE , STEVEN E	Past Owner	100%	SOLE OWNER	8744845800000	1987/12/23		
BELLO CONSTRUCTION CO INC	Past Owner	0%	SOLE OWNER	0000000000000			



Tax Collector » Parcel History for Parcel 0239-151-32-0000

PARCEL	CHANGE	EVENT TYPE	EVENT DATE
0239151390000	NEW	SPL	02/28/1975
0239151400000	NEW	SPL	02/28/1975

You can use the menu to the left to see additional information about this parcel.

Military Surplus Property Sale 0239-151-32-0000 Inn 1975

Tax Collector » Property Information For Parcel 0239-151-39-0000

Click here for a printer friendly version of this page.

Type of Property: **UNKNOWN**

Address Information		Legal Description			Roll Value
Situs Address	*Protected per CA Govt. Code Sect. 6254.21*	Tract Number	Lot Number	Block/Unit	As of Jan 1, 2017
Billing Address	*Protected per CA Govt. Code Sect. 6254.21*				$0.00
As Of	12/20/1996	MAP 148 36 180A PAR 9 EX MNL RTS RESERVATION OF RECORD			

Present Owner Information

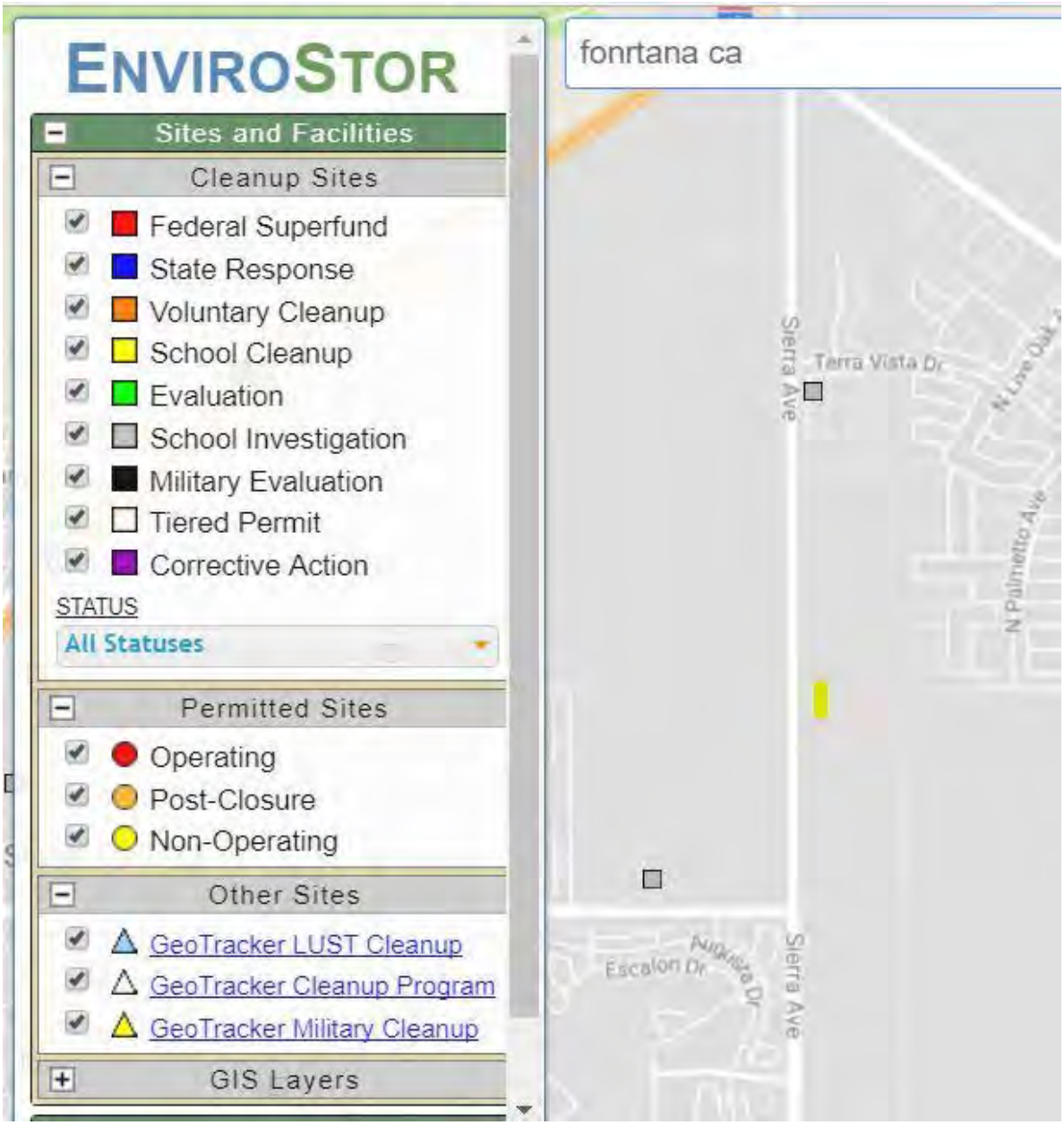
Name	Percent Ownership	Relationship	Document Number	Recording Date	Acquire Date	Roll Year
SOUTHERN CALIFORNIA EDISON COMPANY	0%	SOLE OWNER	0000000000000			

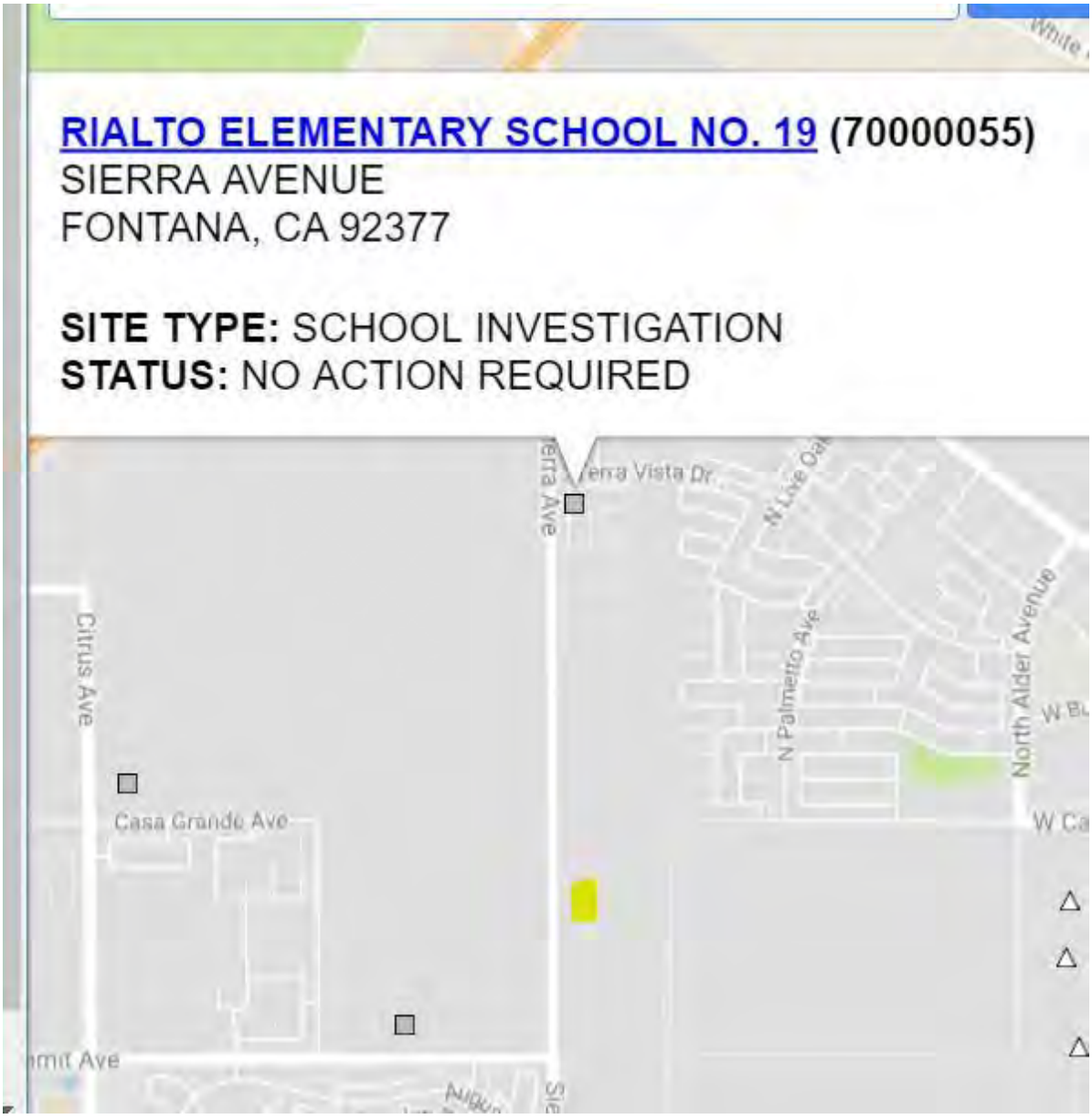
Click here to view parcel history associated with this property.

You can use the menu to the left to see additional information about this parcel.

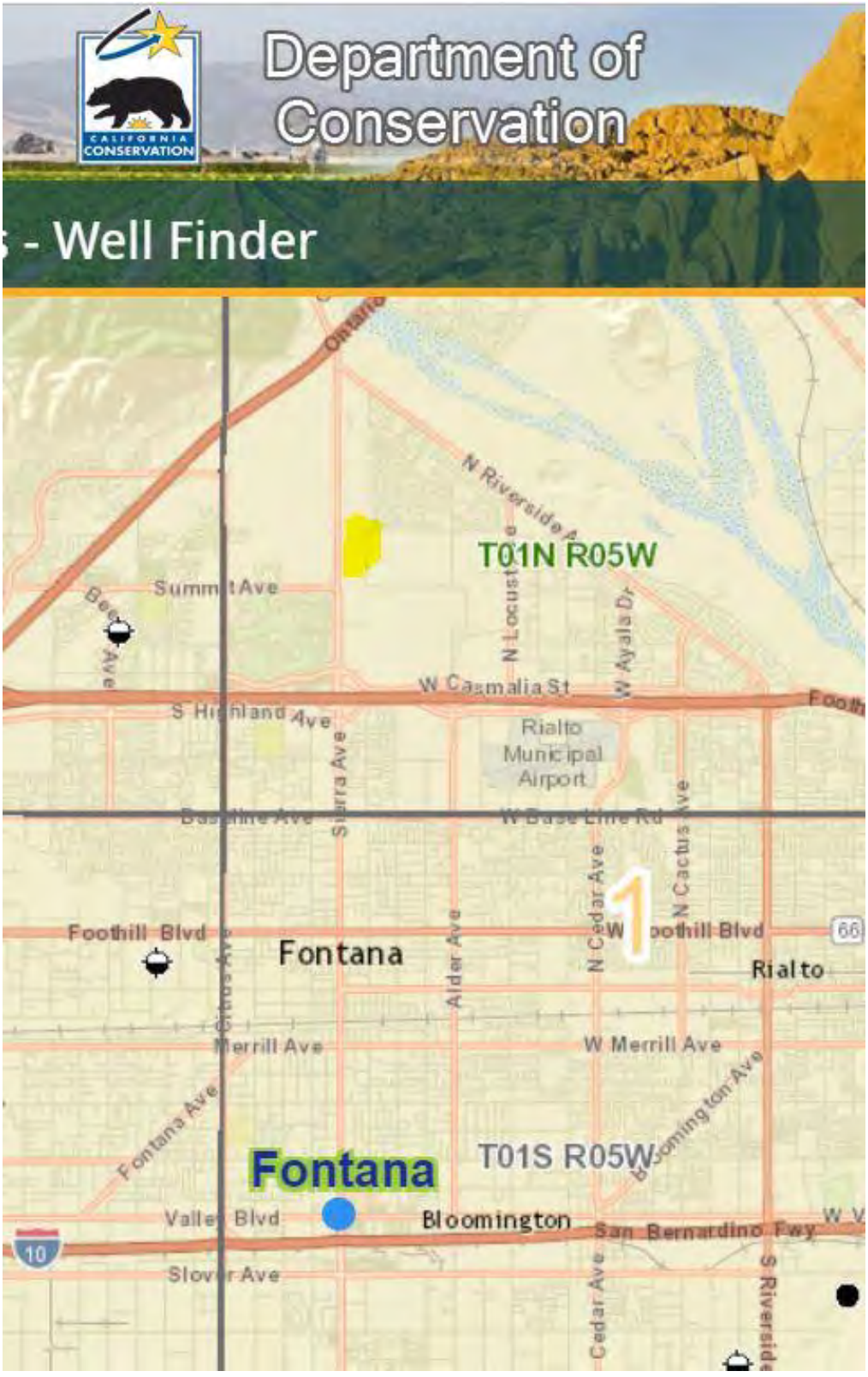
SCE Adjoining Property Owner To East

12.6 DTSC Map & Local Sites


ENVIROSTOR
fonrtana ca
Sites and Facilities
Cleanup Sites
Federal Superfund
State Response
Voluntary Cleanup
School Cleanup
Evaluation
School Investigation
Military Evaluation
Tiered Permit
Corrective Action
STATUS
All Statuses
Permitted Sites
Operating
Post-Closure
Non-Operating
Other Sites
GeoTracker LUST Cleanup
GeoTracker Cleanup Program
GeoTracker Military Cleanup
GIS Layers
Sierra Ave
Terra Vista Dr
N Palmetto Ave
Escalon Dr
Sierra Ave


RIALTO ELEMENTARY SCHOOL NO. 19 (70000055)
SIERRA AVENUE
FONTANA, CA 92377
SITE TYPE: SCHOOL INVESTIGATION
STATUS: NO ACTION REQUIRED
Citrus Ave
Casa Grande Ave
N Palmetto Ave
North Alder Avenue

12.7 DOGGR Map Section



No Oil Wells Close Enough To Be Of Concern

12.8 SCAQMD Find

AQMD

Facility INformation Detail (FIND)

arch Again

cility ID	Facility Name	Facility Address
8877	5565 SIERRA AVE INVESTORS L.C	5565 SIERRA AVE , FONTANA, CA 92335
1151	ALWAYS COOKIN BARBEQUE, HARVEY GAINES	3740 SIERRA AVE , FONTANA, CA 92335
2186	AMERICAN GAS/A NIKAKHTAR	3740 SIERRA AVE , FONTANA, CA 92335
6813	APPLE SCCAL, LLC	16367 SIERRA LAKES PKY , FONTANA, CA 92336
5673	APPLEBEE'S REST WEST LLC	16367 SIERRA LAKES PKY , FONTANA, CA 92336
4995	ARCO AM/PM, AZER REZK	7325 SIERRA , FONTANA, CA 92336
1212	B & A FUEL CENTER, INC.	3740 SIERRA AVE , FONTANA, CA 92335
5487	CARL'S JR 226	16565 SIERRA LAKES PKY , FONTANA, CA 92336
7356	CHEVRON DLR, J & R OIL COMPANY INC	3870-3 SIERRA AVE , FONTANA, CA 92336
8153	COFFMAN SPECIALTIES INC	SIERRA AVE/HIGHLAND AVE , FONTANA, CA 92336
7196	COSTCO WHOLESALE CORPORATION # 627	16505 SIERRA LAKES PKY , FONTANA, CA 92336
9095	COUNTY OF SAN BERNARDINO	7977 N SIERRA AVE , FONTANA, CA 92336
148	DELTA FAMILY RESTAURANT	10144 SIERRA AVE , FONTANA, CA 92336
491	DOVE OIL INC	3740 SIERRA AVE , FONTANA, CA 92335
0228	EARL SCHEIB OF CALIFORNIA INC	9530 SIERRA AVE , FONTANA, CA 92335
3068	EQUILON ENT LLC, SHELL SVC STN	3864 SIERRA AVE , FONTANA, CA 92335
9307	EQUILON ENTERPRISES, LLC.	SIERRA AVE @ I - 15 , FONTANA, CA 92336
1008	FAYEZ HUSSEIN - MUNEER RASHEED	3740 SIERRA AVE , FONTANA, CA 92335
8275	FONTANA VALERO	3740 SIERRA AVE , FONTANA, CA 92335
2842	FONTANA VALERO, FAYEZ HUSSEIN	3740 SIERRA AVE , FONTANA, CA 92335
0851	GOURMET SYSTEMS OF CALIFORNIA, INC	16367 SIERRA LAKES PKY , FONTANA, CA 92336
942	LE MEUR WELDING & MFG CO	6151 SIERRA AVE , FONTANA, CA 92335
8224	LOWES HOME IMPROVEMENT WAREHOUSE	16351 SIERRA LAKES PKY , FONTANA, CA 92336
9718	MIDLAND OIL, ARCO AM/PM DBA	3892 SIERRA AVE , FONTANA, CA 92335
0974	NORWEST GROUP OF COMPANIES, INC.	3740 SIERRA AVE , FONTANA, CA 92335

SOUTH COAST AQMD

Facility INformation Detail (FIND)

Search Again

Facility ID	Facility Name	Facility Address
155613	RALPHS GROCERY # 113	16225 SIERRA LAKES PKY , FONTANA, CA 92336
154032	RALPHS GROCERY CO #113	16625 SIERRA LAKES PKY , FONTANA, CA 92336
99781	SAN BERNARDINO CO SOLID WASTE MGMT DEPT	5087 SIERRA AVE , FONTANA, CA 92336
112328	SAN BERNARDINO CO WASTE SYSTEM DIV	5107 SIERRA AVE , RIALTO , CA 92335
136816	SHELL OIL PRODUCTS US ,SIERRA SHELL #10	3864 SIERRA AVE , FONTANA, CA 92336
180897	SIERRA COMMERCE CENTER 2	5885 SIERRA AVE , FONTANA, CA 92336
114398	SIERRA FONTANA INVESTMENTS/ARCO AM PM	3892 SIERRA AVE , FONTANA, CA 92336
157277	SIERRA LAKE CLEANERS	16953 SIERRA PKY , FONTANA, CA 92335
185236	SIERRA LAKES COMMERCE CENTER	5101 SIERRA AVE , FONTANA, CA 92336
162089	SIERRA METAL & TRUCK BODY FAB., INC.	5183 SIERRA AVE , FONTANA, CA 92336
176987	SIERRA SAN ANTONIO MEDICAL PLAZA	16465 SIERRA LAKES PKY , FONTANA, CA 92336
152015	TESORO SO COAST CO LLC, COST CTR #68534	3864 SIERRA AVE , FONTANA, CA 92336
143205	US PETRO, INC/CHEVRON FONTANA	3870-B SIERRA AVE , FONTANA, CA 92336
126741	WILLIAMS COMMUNICATIONS, LLC	4852 SIERRA AVE , FONTANA, CA 92336

First | Prev | Page 2 of 2 (39 records) | Next | Last | Page 2 | Export To Excel

Not On SCAQMD Facilities List

12.9 City Directories

City Directories Were Not Considered Necessary For This Report

12.10 Tier I Vapor Encroachment Screening (VES)

TIER I VAPOR ENCHROACHMENT SCREENING (VES) Conducted As Part of Phase I ESA

E2600 – 15

PROJECT NAME: APN 0239- 151 - 40
PROPERTY ADDRESS: NE Corner N Sierra Ave &
Casa Grande Dr
Fontana, CA 92336

UNITS: 0

QUESTIONNAIRE COMPLETED BY: S&S Commercial Environmental Services, Inc.

NAME: Stephen A. Quartararo
TITLE: C.E.O., Environmental Professional CFR Title 40 Section 412.22
ADDRESS: 6693 Moonriver Street CITY/STATE/ZIP: Eastvale, CA 91752
TELEPHONE: (949)650-4994 EMAIL ADDRESS: s.quart@att.net

DATE OF RESPONSE : 1-18-18

1	Property type	[ ] Commercial	[ ] Industrial	[ ] Multi-Tenant [ ] Vacant Land
2	Are there any buildings/ structures on the property?	Yes [ ]	No [X]	Unknown [ ]
3	Will buildings/structures be constructed on the property in the future?	If yes, type construction _ Yes [ ]	No [X]	Unknown [ ]
4	If buildings exist or are proposed, do/will they have	If yes, type construction _____ Yes [ ]Hydraulic	No [X]	
5	elevators?Type of level below grade (existing)	[ ] Full Basement	[ ] Crawl Space	[X] Slab on Grade
		[ ] Parking Garage	[ ] Multi-level	
6	Ventilation in level below grade?	Yes [ ]	No [X]	Unknown [ ]
7	Sump pumps, floor drains, or trenches (existing) Radon or	Yes [ ]	No [X]	Unknown [ ]
8	methane mitigation system installed? Not Needed	Yes [ ]	No [X]	Unknown [ ]
9	Heating system type (existing)	(CHECK ALL THAT APPLY)		
		[ ] Hot Air Circulation		[ ] Electric Baseboard
		[ ] Hot Air Radiation		[X] Heat Pump
		[ ] Hot Water Radiation		[ ] Wood Stove
		[ ] Kerosene Heater		[ ] Steam Radiation
		[ ] Fireplace		[ ] Coal Furnace
		[ ] Radiant Floor Heat		[ ] Hot Water Circulation
		[ ] Fuel Oil Furnace		[ ] Gas Furnace
		[ ] Other		
10	Type of fuel energy (existing or proposed)?	(CHECK ALL THAT APPLY)		
		[X] Natural Gas [ ]		[X] Electric
		Propane [ ] Kerosene [ ]		[ ] Fuel Oil
		Coal		[ ] Wood
		[ ] Other		[ ] Solar
11	Have there ever been any environmental problems at the property?	Yes [ ]	No [X]	Unknown [ ]
12	Does/was/will a gas station or dry cleaner operate anywhere on the property?	If yes, describe _____ Yes [ ]	No [X]	Unknown [ ]
13	Do any tenants use hazardous chemicals in relatively large quantities on the property?	Yes [ ]	No [X]	Unknown [ ]
14	Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building?	If yes, describe _____ Yes [ ]	No [X]	Unknown [ ]
15	Are the operations (or proposed operations to be performed) on the property	Yes [ ]	No [X]	Unknown [ ]
16	Were/Are there any existing or proposed underground storage tanks (USTs) or above ground storage tanks (ASTs)?	Yes [ ]	No [X]	Unknown [ ]
17	Are there any sensitive receptors (for example, children, elderly, people in poor health, and so forth) that occupy or will occupy the property? Senior Citizens Aparments?	Yes [ ]	No [X]	Unknown [ ]
18	Is property a collection of parcels tied together for current use?	Yes [ ]	No [X]	Unknown [ ]
19	Where there any uses identified in Phase I research on the subject or adjoining properties which used chemical formulations considered Chemicals of Concern (COC)	Yes [ ]	No [X]	Unknown [ ]
20	If COC were identified, is COC use continuing on the property?	Yes [ ]	No [X]	Unknown [ ]
21.	If COC were identified on the adjoining properties, continuing?	Yes [ ]	No [X]	Unknown [ ]
22	If COC were identified, was/is their use significant?	Yes [ ]	No [X]	Unknown [ ]
23	If COC use was/is significant is/was there migitigation? Explain - see below	Yes [ ]	No [-]	Unknown [ ]
24.	Is a source of vapor within 100 feet of TP - Encroachment Condition	Yes [ ]	No [-]	Unknown [ ]
25.	Does Tier I Phase I or HUD 4128 Screening Indicate Need for Tier 2	Yes [ ]	No [X]	Unknown [ ]

26. Subject Property was vacant residential then vacant. Septic for domestic only expected

Federal Regional & California Human Health Screening Levels (CHHSLs) 2010. HUD 2016, ASTM E2600 - 15 Vapor Intrusion, Vapor Encroachment Condition.

This list is a voluntary checklist to determine if a VEC is identified for the Target Property (TP) (that is, the presence or likely presence of COC vapors in the vadose zone of the TP caused by the release of vapors from contaminated soil and/or groundwater either on or near the TP

ASTM defines the term "Vapor Encroachment Condition" - presence or likely presence of "chemical of concern" vapors in the subsurface of the Target Property caused by the release of vapors from contaminated soil or groundwater or both either on or near the Target Property as identified by the Tier 1or Tier 2 procedures,

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12.11 Letter from Magnetek

The following is a reprint of:

MagneTek
Universal Manufacturing

200 Robin Road
Paramus, NJ 07652
Phone (201) 967-7600
TELEX 753330
Fax (201) 967-0904

Mailing Address
P.O. Box 3028
Paterson, NJ 07509

RE: PCB's

Ballasts are used in fluorescent fixtures in business, commercial and industrial establishments, as well as in schools. One of the devices used in these ballasts is called a capacitor, which makes the ballasts operate more efficiently. These capacitors, used in ballasts made by every manufacturer in the industry, including Universal, used PCBs in small amounts until 1978, when a change was made to another liquid. Universal ballasts manufactured since January 1979 do not contain PCBs and the label of all these ballasts contain the statement "No PCB's".

The capacitor is a hermetically sealed device, which entirely isolates the PCB from human contact. The typical fluorescent ballast contained about 0.05 lbs. of 100% PCB liquid. That represents 1-2 liquid ounces. The weight of PCB used in relationship to the total capacitor weight, was approximately 15%. In relationship to the total ballast weight it varied from 0.6% (Slimline ballasts) to 1.5% (2 lamp, 40 watt ballasts). The degree of chlorination was 42%.

For HID ballasts where larger capacitors were used, it may have been as much as 5-6 ounces of liquid. In all cases the amount of "free PCBs" (the quantity that could leak if the can ruptured), was much less because most of the liquid was absorbed by the blotter-like dielectric material.

Ballasts occasionally fail in service and sometimes the asphalt (tar) with which they are filled melts and leaks out. On very rare occasions, the capacitor will also rupture and its contents mix with the tar. If a leak occurs, it should be cleaned up with any petroleum-based solvent.

Such a leak does not represent any significant immediate or long-term hazard. The United States Environmental Protection Agency has recognized the existence of PCBs in ballasts, has carefully evaluated the situation and in the regulations controlling the use and disposal of PCBs has concluded that continued use in existing lighting installations is acceptable; also that the occasional ballasts which becomes defective in service may be disposed of in compliance with 40 CFR* Part 761 or check with your local State Environmental Protection Agency for instruction.

Should you have any questions regarding this matter, please do not hesitate to call me at your convenience.

Very truly yours,

MagneTek Universal Manufacturing

Robert E. Babcock
Manager, Marketing Engineering

REB:cp

* Code of Federal Regulations

12.12 Certification

ENVIRONMENTAL PROFESSIONAL CERTIFICATION

I, Stephen A. Quartararo declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in Section 312.10 of this part [40CFR Part 312].

I have the specific qualifications based upon education, training, and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



12.13 Resume

RESUME

STEPHEN A. QUARTARARO http://www.phase1reports.com
Environmental Professional, CFR Title 40 Code of Federal Regulations Section 312.22
ASTM 1527-2013, CA 2010 CHHSLs, CA HERO 2015, HUD 2015 and SBA May 1, 2015.

Owner S&S Commercial Environmental Services, Inc. since formation 1997. General Engineering Contractor A, Hazardous Materials Certified, General Building Contractor B, Insulation and Acoustical C-2, Asbestos Certified, Water Well Drilling Contractor C-57. Real Estate Brokers License, Life & Health Insurance License.

Phase I Site Surveys, Phase II Soil and Groundwater Investigations, Phase III Remediation of Soil and Groundwater leading to No Further Action or Closure by Local, County, State and Federal Agencies. Environmental Hazard Assessment, Project Cost to Cure Physical Deterioration, Construction Management, Environmental Site Appraisals. Storm and Irrigation Water Conservation, Re-use.

RECENT PROJECTS
December 2016 - Facilitator with LA County Fire Department Site Mitigation Unit and General Engineering Contractor for Closure of 3.5 acre industrial property in Carson, CA over a five year period. Removal of PCE Vapor in three major areas to 45 feet. Removal and off haul of 30 = twenty-four ton truckloads of gasoline and diesel, pce and tce contaminated waste under over site of LA County Fire Department Site Mitigation Unit in a final remediation of source. Closure of minimally contaminated groundwater at 58 feet as non-beneficial water attenuating naturally.

March 2016 - No Further Action (NFA) Closure Letter for Soil, Soil Vapor and Groundwater for large light industrial property in Carson, CA - Proved liability for further quarterly monitoring and remediation of groundwater under NFA property was responsibility of Owner of an off site VOC contaminant source being remediated by Others. Coordinator for Oil Well Re-abandonment at Signal Hill Site 2009, Valencia 2006.

EXPERIENCE
6,000 plus Phase I site assessments in CA, AL, AZ, AR, NV, NY and TN.
100's of Phase II and Phase III site investigations and closures in CA.

39 years as asbestos and environmental consultant and abatement contractor direct and subcontract. 20 of those years as owner of an Environmental Company, 19 as a General Engineering Contractor with Hazardous Certification and 3 of those years with related storm and irrigation water conservation related companies.

Professional cost estimation, third party verification of sampling activities, underground tank removal monitoring and property assessment consultant for soil and groundwater.

Coordinator of design and construction in two Los Angeles high rise office buildings for fire safety retrofit under the City of Los Angeles fire life safety ordinance.

Develop and Design of Affordable Housing, including site selection, negotiation, planning and permit process and funding sourcing.

MAJOR CONTRACTS

UC Santa Barbara (1979) - HVAC system cleaning of five-story Chemistry and Physical Sciences buildings on campus**.**

VA Medical Center LA Jolla (1980) **-** After-fire decontamination of Surgery Floor HVAC.

TRW (1983) - Bulk materials sampling for asbestos in 65-building facility, Redondo Beach, CA.

UC Chancellors Office, UC San Francisco Medical Center (1984) - Survey design, field work completion, report design, report completion for UC Chancellor's office's funding request to State Assembly funding for asbestos abatement and management - 103 buildings - hospital, classrooms, administrative offices.

California Hospital Medical Center (1983) - Contract and specification design and completion of asbestos abatement projects.

County of Los Angeles (1984) - Approval of specifications, third party monitoring of contractor during Building 5 Asbestos Abatement Project at Rancho Los Amigos Medical Center.

JMB Property Management (1985) - Coordination as part of Pacific Abatement Group with building management and Med Tox abatement and hygiene personnel on 3 stories of asbestos containment project in 25 story high rise office building, Century City, CA.

UC Riverside (1985) - *Asbestos management and control in utility tunnels under campus.*

Tishman Construction (1985) - Area containment for electrical work adjacent to occupied areas in asbestos affected Bank of America offices at ARCO Towers, Los Angeles, CA.

Equitable Real Estate Investment Management (1986) - Asbestos abatement and containment projects, including elevator lobby doors, full floor abatement and after-fire decontamination projects in former First Interstate Bank and Union Bank buildings, Los Angeles, CA.

Baxter Pharmaceutical (1988) - Building materials sampling for asbestos and reports for 14 buildings in seven Midwest States.

Fremont Indemnity (1991) - Independent owner's agent for fire protection citation response to LAFD and construction of tenant improvements for asbestos abatement and fire life safety rehabilitation of 11-story office building in midtown Los Angeles. Included removal of underground diesel tank.

Redlands Federal Savings (1990) - Phase I Environmental Assessments of raw land in Inland Empire and San Diego areas of Southern California.

SPS Technologies (1993) - **"Qualified Risk Assessment"(QRA)** for sale of existing 20-acre site in Costa Mesa, CA: Work involved review of commercial appraisals, Environmental Site Remediation work completed, further remediation cost proposals, interviews with responsible government agencies, interviews with banking authorities, preparation of report detailing current conditions and value of property less expected remediation costs, results of interviews with regulatory agencies and financial authorities, four scenarios under which the property might be sold and the anticipated financial return and liability concerns of each scenario.

Money Store Investment Corporation (from 1992 until sold) - Related - 400+ Phase I Environmental Assessments of commercial property as collateral for SBA backed commercial loans in California.

First Union/Wachovia - Successors to Money Story Investment Corporation, Then Wells Fargo

Coast Federal Savings (Former- early 1990's) - 300+ Phase I Environmental Assessments and Asbestos Inspections of residential apartment buildings, commercial shopping centers and other commercial buildings from San Diego to San Francisco and Sacramento to New York State.

Chevron Real Estate Services (1991) - Coordination and management of gasoline contaminated soil remediation project in Blythe, CA; work included shoring to 30 feet along the western perimeter of project to protect adjacent restaurant, removal and bio-remediation of 3,500 cubic feet of contaminated soil, removal of 5,000 gallons of contaminated water, placement of filter

over local groundwater, back filling of excavation with remediated soil.

Carlsberg Management Company (1989-1995) - Independent owner's agent for fire protection citation response to LAFD and construction of tenant improvements for asbestos abatement and fire life safety rehabilitation of 10-story office building in West Los Angeles.
Owner's representative: work included selection and coordination of architect, mechanical, electrical, fire sprinkler, asbestos abatement/containment and industrial hygiene contractors and interface with the City of Los Angeles Building, Electrical and Structural Departments and Inspectors over a five year period under occupied and vacant building conditions.
California Federal Bank (1993) - Phase I Environmental Assessments and Asbestos Inspections of commercial and residential buildings in Northern and Southern California.
Folger & Levin, Law Firm (1995) - "Environmental Risk Assessment" (ERA) for 3-acre parcel in West Los Angeles. Review of six environmental soil and groundwater studies, practical expansion of research and coordinated explanation of real environmental issues for use by commercial property appraiser.
State Farm Insurance Company (1995) - Asbestos expert for client negotiations.
Berger, Kahn, Shafton, Moss, Figler, Simon & Gladstone (1996/1997) - Asbestos expert witness.
Prestholt, Kleeger, Fidone & Villasenor (1996) - Asbestos expert witness.
S&S Commercial Environmental Services (1997 - Present) - Phase I Site Assessments and Miscellaneous Independent Project Management and General Engineering Contractor for soil and groundwater sampling and remediation leading to site closure letter from County and City Fire Departments, Health Departments and CA Regional Water Boards ranging from thousands to hundreds of thousands of dollars. Oil Well Re-abandonment.
Bank of America - Related - Phase I Environmental Assessments Southern California.
Wells Fargo Bank - Phase I Environmental Assessments and Asbestos Inspections in California for Standard and SBA backed RE property loans. *(Successor To Wachovia Bank - SBA Division)*
Chase Bank - Phase I Site Assessments
First Foundation Bank - Phase I Environmental Site Assessments & Phase I Reviews, Phase II Site Investigations. California and Nevada
Standard Life Insurance Company - Phase I Site Assessments
Metropolitan Life Insurance Company - Phase I Site Assessments
Textron Financial - Heritage Golf Group - 127 Acre Golf Course Santa Clarita - Phase I
Blue Green Preservation - Phase I and Phase II Site Assessments HUD Senior Housing California, Alabama, Tennessee, Arkansas
Miscellaneous Independent Cost Estimation for required remediation of contaminated sites with commercial and industrial property appraisers.

EDUCATION
B.S. Urban Environmental Management; Cal State University Dominguez Hills
J.D. Candidate Classes in Torts, Contracts, Criminal Law, Legal Writing; Western State University, Southern California College of Law
Major Emphasis - Tort Theory and the implications to modern environmental contamination and clean-up problems.
"Low Risk Closure Guidelines" - California Regional Water Quality Board - Los Angeles Region Seminar June 1996.
Miscellaneous Classes provided by State Agencies in past twenty years and job site discussion regarding water quality standards and remediation with Regulators for Closure.

California Storm Water Association (CASQA - Member and participation as vendor representing OSORB as Absorb Concentrate & Eliminate (AC&E San Diego August 2012. Member and participation as vendor representing ASRE (Advanced Stormwater Recovery & Engineering Garden Grove September 2014.

LICENSES
California ***A General Engineering Contractor , Hazardous Materials Certified***
California **B General Building Contractor**
California ***C-2 Contractors License, Asbestos Certified***
California **C-57 Water Well Driller**
California ***Real Estate Broker***
CA **Life & Health Agent (former)**

Current & Former
CERTIFICATIONS
Certified Asbestos Consultant (CAC, State of California
EPA/AHERA *Competent Person, Supervisor/ Management Planner/Project Designer*
Hazwhopper *48 Hour OSHA Certified Field Supervisor*
Certified Professional Estimator (CPE) *Lead Abatement Supervisor*

REGISTRATIONS
Registered Environmental Assessor (REA)
Registered Property Manager (RPM)

AFFILIATIONS
American Society of Professional Estimators (ASPE)
California Society of Real Estate Appraisers (CSOREA)
American Institute of Plant Engineers ***(AIPE)***
California Society of Hospital Engineers ***(CSHE)***
National Society of Power Engineers ***(NSPE)***
Kiwanis International, Greater Anaheim, CA ***(KIWANIS)***

PUBLICATIONS
Industrial Real Estate Association Fall 1997 Newsletter, "The Environmental Report, To Close or Not To Close", 1997
Home Trader Publications, Copyright 1994 - Residential properties for sale or trade. ***American Numerous articles on asbestos in "Asbestos Issues", a nationally published magazine, and the "Los Angeles BOMA" magazine.***

SEMINAR SPEAKER
IRS (Internal Revenue Service), "Discounted Value of Asbestos and Environmentally Affected Property"
CATL (CA Assoc of Thrift and Loans), "The Affect of Asbestos and Environmental Discounts on Loans"
American Society of Professional Estimators - "The Design and Estimate of an Asbestos Abatement Project"
Los Angeles Board of Realtors, "Asbestos in Homes and Property"
(AIPE) American Institute of Plant Engineers, "Asbestos, History and Challenges"
(CSHE) California Society of Hospital Engineers, "Asbestos, History and Challenges"

(SCACEO)Southern California Association of Code Enforcement Officials "Single Room Occupancy Hotels, History and Modern Operations"

TRAINING CLASSES PRESENTED

8-hour Asbestos Awareness Class presented to:

* City of LA Fire Safety Inspectors
* Zurn Cosco Supervisors and Workers
* Grinnell Fire Protection Supervisors and Workers

EDUCATION VIDEOS

Installation of Fire Sprinkler Hangers within asbestos affected environments, 1986

SROs, The Myth and Reality, 1991

DEVELOPMENT DESIGN

General Partner - 210-unit Single Room Occupancy (SRO residential project in Anaheim, CA.

General Partner - 55-unit Single Room Occupancy (SRO residential project in Santa Ana, CA.

EMPLOYMENT HISTORY AND OWNERSHIP

S & S Commercial Environmental Services, Inc., ASRE, Inc. AC&E, Inc., Enviroprop, Home Trader Realty, Inc., Equity Funding Mortgage, NATEC International, Inc., McClelland Management Services, National Abatement Corporation, Med-Tox Consultants, Pacific Abatement Group, Asbestos

12.14 Environmental Records Search (ERS) Report

ENVIRONMENTAL RECORD SEARCH

"The Intelligent Choice"

RecCheck

Report Results

The Standard for ASTM/AAI Radius Searches

(One Mile Environmental Records Search, Exceeds ASTM 1527/1528 and EPA All Appropriate Inquiry)

REPORT RESULTS



Site Location:

Ne Corner Of N Sierra Ave And W Casa Grande Drive, Apn 0239-151-40
Fontana, CA 92336
(N 34-9-30, W 117-26-8) NAD83

Client:

S&S Commercial Environmental Services, Inc.

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EXECUTIVE SUMMARY

INFORMATION ON THE REQUESTED LOCATION

Site Address:	Ne Corner Of N Sierra Ave And W Casa Grande Drive, Apn 0239-151-40 Fontana, CA 92336
Client Project Name/Number:	2104692173
Coordinates:	N 34-9-30, W 117-26-8 (NAD 83) 34.158195, -117.435683
Date of Report	January 19, 2018
ERS Project Number:	2104692173
Subject Site Listed on the following lists:	Not Listed
Subject Site Listed as Map ID#:	N/A
USGS 7.5 Minute Quad Map:	Devore (2015-03-17)
Subject Site Located within a Potential Area of Concern:	No
Township, Section and Range:	Township: 01N Range: 05W Section: 20 Baseline: San Bernardino
Site Elevation: (feet above or below (-) mean sea level)	1747
Flood Zone: (FEMA Q3 Digital Data)	Panel: 06071C7920H, Effective Date: 8/28/2008 Zone X - Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
Fire Insurance Map Coverage:	Coverage May Exist in Fontana. Years: 1926, 1929, 1938. Sources: ERS; Stanford Univ. ; California State Univ., Northridge,Stanford Univ. ;
Radon Information:	EPA Radon Zone: 2 (Predicted avg for county: 2 to 4 pCi/L)For zip code 92336: Number of tests per zip code: 3 Number of tests where radon is > 4 pCi/L: 0 Percentage of test where radon is > 4 pCi/L: 0.00% Other Information: Not Reported
Search Radius Expansion Size: (In Miles)	0

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Soil Type: **(USDA Soil Survey Geographic Database) (SSURGO)**	Soboba gravelly loamy sand, 0 to 9 percent slopes Map Unit Type: Consociation Hydric: No Drainage Class: Excessively drained General Information: Sandy-skeletal, mixed, thermic Typic Xerofluvents
Zip Codes Searched for "Un-Mappable" Sites:	Not Researched
Occurrence Count:	1

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SUMMARY OF OCCURRENCES

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
A1 Maps: 6	245 B.F. GOODRICH	3196 NORTH LOCUST RIALTO	NPL-R9-US	Currently on the Final NPL	0.98 E	N/A

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POTENTIAL AREAS OF CONCERN/CONTAMINATION SUMMARY

DATABASE SEARCHED	SUBJECT SITE WITHIN POTENTIAL AREA OF CONCERN	AREAS FOUND WITHIN 1-MILE RADIUS
NPL-R9-US	No	1
MethaneLF-CA	No	0
LA-LF-CA	No	0
Military-Bases-US	No	0
SGV-Deep-Plumes-CA	No	0
SGV-Shallow-Plumes-Puente-Valley-CA	No	0
SGV-Shallow-Plumes-CA	No	0

DATABASE OCCURRENCE SUMMARY

HIGH RISK* OCCURRENCES IDENTIFIED IN REQUESTED SEARCH RADIUS		
DATABASE SEARCHED	DISTANCE SEARCHED (MILES)	HIGH RISK OCCURRENCES FOUND
CERCLIS-US	0.5	0
CorAct-Open-CA	0.5	0
County-LUST-Open-CA	0.5	0
County-SLIC-Open-CA	0.5	0
Hist-UST-Cleanup-CA	0.5	0
LUST-Open-CA	0.5	0
Military-Active-CA	1	0
NPL-US	1	0
Proposed-NPL-US	1	0
Response-CA	1	0
SAA-Agreements-US	1	0
School-Active-CA	0.5	0
SLIC-Open-CA	0.5	0
State-Response-Active-CA	1	0
Superfund-Active-CA	1	0
Tribal-LUST-Open-Reg9	0.5	0
VCP-Active-CA	0.5	0

* For the purposes of this report, “high risk” occurrences are those that have known contamination and have not received a “case closed” or “no further action” status from the agency that maintains the records.

ASTM/AAI STANDARD RECORD SOURCES SUMMARY				
STANDARD ENVIRONMENTAL RECORD SOURCES	ASTM MIN. SEARCH DIST. / ERS SEARCH DIST. (MILES)	ERS DATABASE NAME	TOTAL LISTINGS	MAP ID #’S
Federal NPL site list	1.0 / 1.0	NPL-US	0	None Listed
		Proposed-NPL-US	0	None Listed
Federal Delisted NPL site list	0.5 / 1.0	Delisted-NPL-US	0	None Listed

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Federal CERCLIS list	0.5 / 0.5	CERCLIS-US	0	None Listed
Federal CERCLIS NFRAP site list	0.5 / 0.5	CERCLIS-Archived-US	0	None Listed
Federal RCRA CORRACTS facilities list	1.0 / 1.0	RCRA-COR-US	0	None Listed
Federal RCRA non-CORRACTS TSD facilities list	0.5 / 0.5	RCRA-TSDF-US	0	None Listed
Federal RCRA generators list	Property and adjoining properties / 0.25	RCRA-CESQG-US	0	None Listed
		RCRA-LQG-US	0	None Listed
		RCRA-NON-US	0	None Listed
		RCRA-SQG-US	0	None Listed
Federal Inst/Eng control registries	Property Only / 0.25	Controls-RCRA-US	0	None Listed
		Controls-US	0	None Listed
		Hist-US-EC	0	None Listed
		Hist-US-IC	0	None Listed
		LIENS-US	0	None Listed
Federal ERNS list	Property Only / 0.0625	ERNS-US	0	None Listed
State and Tribal-Equivalent NPL	1.0 / 1.0	Response-CA	0	None Listed
		State-Response-Active-CA	0	None Listed
		State-Response-NFA-CA	0	None Listed
		State-Response-Other-CA	0	None Listed
State and Tribal-Equivalent CERCLIS	0.5 / 0.5	Superfund-Active-CA	0	None Listed
		Superfund-NFA-CA	0	None Listed
		Superfund-Other-CA	0	None Listed
State and Tribal landfill and/or solid waste disposal sites	0.5 / 0.5	County-SWF-CA	0	None Listed
		Debris-US	0	None Listed
		Hist-Dumps-US	0	None Listed
		Hist-SWF-CA	0	None Listed
		Land-Disposal-CA	0	None Listed
		SWIS-CA	0	None Listed
		SWLF-US	0	None Listed
		Tribal-ODI-US	0	None Listed
State and Tribal Leaking Storage Tank Lists	0.5 / 0.5	County-LUST-CA	0	None Listed
		County-LUST-Closed-CA	0	None Listed
		County-LUST-Open-CA	0	None Listed
		Hist-UST-Cleanup-CA	0	None Listed
		LUST-Closed-CA	0	None Listed
		LUST-Open-CA	0	None Listed
		Tribal-LUST-Closed-Reg9	0	None Listed

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		Tribal-LUST-Open-Reg9	0	None Listed
State and Tribal Registered Storage Tank Lists	Property and adjoining properties / 0.25	AST-CA	0	None Listed
		AST-CRSP-CA	0	None Listed
		City-AST-CA	0	None Listed
		City-UST-CA	0	None Listed
		County-AST-CA	0	None Listed
		County-UST-CA	0	None Listed
		CRSP-CA	0	None Listed
		FEMA-UST-US	0	None Listed
		Hist-UST-CA	0	None Listed
		Tribal-UST-Reg9	0	None Listed
		UST-Abandoned-CA	0	None Listed
		UST-CA	0	None Listed
		UST-Closed-CA	0	None Listed
		USTComp-CA	0	None Listed
		UST-CRSP-CA	0	None Listed
		UST-Priority-CA	0	None Listed
		UST-Proposed-CA	0	None Listed
State and Tribal Inst/Eng Control Registries	Property Only / 0.5	Controls-CA	0	None Listed
		Deed-CA	0	None Listed
		Hist-Controls-CA	0	None Listed
		HWMP-Controls-CA	0	None Listed
		Liens-CA	0	None Listed
State and Tribal Voluntary Cleanup Sites	0.5 / 0.5	Eval-Hist-CA	0	None Listed
		Eval-Hist-NFA-CA	0	None Listed
		Military-Active-CA	0	None Listed
		Military-NFA-CA	0	None Listed
		Military-Other-CA	0	None Listed
		School-Active-CA	0	None Listed
		School-NFA-CA	0	None Listed
		School-Other-CA	0	None Listed
		Tribal-VCP-US	0	None Listed
		VCP-Active-CA	0	None Listed
		VCP-NFA-CA	0	None Listed
		VCP-Other-CA	0	None Listed
State and Tribal Brownfield Sites	0.5 / 0.5	BF-MOA-CA	0	None Listed
		BF-Tribal-US	0	None Listed

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	**DISTANCE SEARCHED**	**SUBJECT SITE**	**0.125 MILES**	**0.25 MILES**	**0.5 MILES**	**1.0 MILES**	**TOTAL**
BF-Tribal-US	0.5	0	0	0	0	-	0
BF-US	0.5	0	0	0	0	-	0
CERCLIS-Archived-US	0.5	0	0	0	0	-	0
CERCLIS-US	0.5	0	0	0	0	-	0

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FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Controls-RCRA-US	0.5	0	0	0	0	-	0
Controls-US	0.5	0	0	0	0	-	0
Debris-US	0.5	0	0	0	0	-	0
Delisted-NPL-US	1	0	0	0	0	0	0
ERNS-US	0.0625	0	0	-	-	-	0
FEMA-UST-US	0.25	0	0	0	-	-	0
FTTS-ENF-US	0.25	0	0	0	-	-	0
Hist-Dumps-US	0.5	0	0	0	0	-	0
Hist-US-EC	0.5	0	0	0	0	-	0
Hist-US-IC	0.5	0	0	0	0	-	0
HMIS-US	0.0625	0	0	-	-	-	0
LIENS-US	0.0625	0	0	-	-	-	0
NPL-US	1	0	0	0	0	0	0
PADS-US	0.0625	0	0	-	-	-	0
PCB-US	0.25	0	0	0	-	-	0
Proposed-NPL-US	1	0	0	0	0	0	0
RCRA-CESQG-US	0.25	0	0	0	-	-	0
RCRA-COR-US	1	0	0	0	0	0	0
RCRA-LQG-US	0.25	0	0	0	-	-	0
RCRA-NON-US	0.25	0	0	0	-	-	0
RCRA-SQG-US	0.25	0	0	0	-	-	0
RCRA-TSDF-US	0.5	0	0	0	0	-	0
SAA-Agreements-US	1	0	0	0	0	0	0
SWLF-US	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-Reg9	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg9	0.5	0	0	0	0	-	0
Tribal-ODI-US	0.5	0	0	0	0	-	0
Tribal-UST-Reg9	0.25	0	0	0	-	-	0
Tribal-VCP-US	0.5	0	0	0	0	-	0

STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
AST-CA	0.25	0	0	0	-	-	0
AST-CRSP-CA	0.25	0	0	0	-	-	0
BF-MOA-CA	0.5	0	0	0	0	-	0
BZ-HazWaste-CA	0.5	0	0	0	0	-	0
CERS-CA	0.25	0	0	0	-	-	0
CHMIRS-CA	0.0625	0	0	-	-	-	0
City-AST-CA	0.25	0	0	0	-	-	0
City-CUPA-CA	0.25	0	0	0	-	-	0
City-Others-CA	0.25	0	0	0	-	-	0
City-UST-CA	0.25	0	0	0	-	-	0
Controls-CA	0.5	0	0	0	0	-	0
CorAct-Closed-CA	0.5	0	0	0	0	-	0
CorAct-Open-CA	0.5	0	0	0	0	-	0
CORTESE-CA	0.25	0	0	0	-	-	0
County-AST-CA	0.25	0	0	0	-	-	0
County-Hist-CA	0.25	0	0	0	-	-	0
County-LUST-CA	0.5	0	0	0	0	-	0
County-LUST-Closed-CA	0.5	0	0	0	0	-	0
County-LUST-Open-CA	0.5	0	0	0	0	-	0
County-Others-CA	0.25	0	0	0	-	-	0

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STATE ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
County-SLIC-Closed-CA	0.25	0	0	0	-	-	0
County-SLIC-Open-CA	0.5	0	0	0	0	-	0
County-SML-CA	0.5	0	0	0	0	-	0
County-SWF-CA	0.5	0	0	0	0	-	0
County-UST-CA	0.25	0	0	0	-	-	0
CRSP-CA	0.25	0	0	0	-	-	0
CUPA-CA	0.25	0	0	0	-	-	0
Deed-CA	0.5	0	0	0	0	-	0
ENF-CA	0.25	0	0	0	-	-	0
ENF-SMARTS-CA	0.25	0	0	0	-	-	0
ENF-Wastewater-CA	0.25	0	0	0	-	-	0
Eval-Hist-CA	0.5	0	0	0	0	-	0
Eval-Hist-NFA-CA	0.5	0	0	0	0	-	0
HazWaste-CA	0.25	0	0	0	-	-	0
Hist-Controls-CA	0.5	0	0	0	0	-	0
Hist-Cort-CA	0.25	0	0	0	-	-	0
HIST-R4-CA	0.25	0	0	0	-	-	0
HIST-SLIC-CV-CLOSED-CA	0.5	0	0	0	0	-	0
HIST-SLIC-CV-OPEN-CA	0.5	0	0	0	0	-	0
Hist-SWF-CA	0.5	0	0	0	0	-	0
Hist-UST-CA	0.25	0	0	0	-	-	0
Hist-UST-Cleanup-CA	0.5	0	0	0	0	-	0
Hist-WIP-Active-CA	0.5	0	0	0	0	-	0
Hist-WIP-Backlog-CA	0.5	0	0	0	0	-	0
Hist-WIP-Historical-CA	0.5	0	0	0	0	-	0
HWIS-CA	0.0625	0	0	-	-	-	0
HWMP-Controls-CA	0.5	0	0	0	0	-	0
ICE-CA	0.25	0	0	0	-	-	0
Land-Disposal-CA	0.5	0	0	0	0	-	0
Liens-CA	0.0625	0	0	-	-	-	0
LUST-Closed-CA	0.5	0	0	0	0	-	0
LUST-Open-CA	0.5	0	0	0	0	-	0
Manifest2-RI	0.0625	0	0	-	-	-	0
Military-Active-CA	1	0	0	0	0	0	0
Military-NFA-CA	0.5	0	0	0	0	-	0
Military-Other-CA	1	0	0	0	0	0	0
PR-MOA-CA	0.25	0	0	0	-	-	0
Response-CA	1	0	0	0	0	0	0
School-Active-CA	0.5	0	0	0	0	-	0
School-NFA-CA	0.5	0	0	0	0	-	0
School-Other-CA	0.5	0	0	0	0	-	0
SLIC-Closed-CA	0.5	0	0	0	0	-	0
SLIC-Open-CA	0.5	0	0	0	0	-	0
SML-CA	0.5	0	0	0	0	-	0
State-Response-Active-CA	1	0	0	0	0	0	0
State-Response-NFA-CA	0.5	0	0	0	0	-	0
State-Response-Other-CA	0.5	0	0	0	0	-	0
Superfund-Active-CA	1	0	0	0	0	0	0
Superfund-NFA-CA	1	0	0	0	0	0	0
Superfund-Other-CA	1	0	0	0	0	0	0
SWIS-CA	0.5	0	0	0	0	-	0
SWRCY-CA	0.5	0	0	0	0	-	0
UST-Abandoned-CA	0.25	0	0	0	-	-	0
UST-CA	0.25	0	0	0	-	-	0
UST-Closed-CA	0.25	0	0	0	-	-	0

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STATE ASTM/AAI DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
USTComp-CA	0.25	0	0	0	-	-	0
UST-CRSP-CA	0.25	0	0	0	-	-	0
UST-Priority-CA	0.5	0	0	0	0	-	0
UST-Proposed-CA	0.25	0	0	0	-	-	0
VCP-Active-CA	0.5	0	0	0	0	-	0
VCP-NFA-CA	0.5	0	0	0	0	-	0
VCP-Other-CA	0.5	0	0	0	0	-	0

SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Air-CA	0.25	0	0	0	-	-	0
AIR-DIST-CA	0.25	0	0	0	-	-	0
BioFuel-US	0.25	0	0	0	-	-	0
CDL-CA	0.0625	0	0	-	-	-	0
CDL-US	0.0625	0	0	-	-	-	0
CHWF-CA	0.5	0	0	0	0	-	0
Cleaners-CA	0.25	0	0	0	-	-	0
Coal-Ash-Dams-US	0.5	0	0	0	0	-	0
County-BI-CA	0.25	0	0	0	-	-	0
Dams-CA	0.25	0	0	0	-	-	0
DPR-CA	0.25	0	0	0	-	-	0
DryCleaners-CA	0.25	0	0	0	-	-	0
EGRID-US	0.5	0	0	0	0	-	0
EPA-Watch-List-US	0.25	0	0	0	-	-	0
FA-HW-CA	0.0625	0	0	-	-	-	0
FA-HW-US	0.0625	0	0	-	-	-	0
FA-SWF-CA	0.0625	0	0	-	-	-	0
FRS-US	0.0625	0	0	-	-	-	0
FTTS-INSP-US	0.0625	0	0	-	-	-	0
FUDS-US	1	0	0	0	0	0	0
FUSRAP-US	0.25	0	0	0	-	-	0
Haulers-CA	0.0625	0	0	-	-	-	0
Hist-AFS2-US	0.25	0	0	0	-	-	0
Hist-AFS-US	0.25	0	0	0	-	-	0
Hist-AST-CA	0.25	0	0	0	-	-	0
Hist-AWS-CA	0.25	0	0	0	-	-	0
Hist-CA	0.0625	0	0	-	-	-	0
Hist-CalFID-CA	0.25	0	0	0	-	-	0
Hist-CALSITES-CA	0.25	0	0	0	-	-	0
Hist-CERCLIS-NFRAP-US	0.25	0	0	0	-	-	0
Hist-CERCLIS-US	0.25	0	0	0	-	-	0
Hist-City-UST-CA	0.25	0	0	0	-	-	0
Hist-Deed-CA	0.25	0	0	0	-	-	0
Hist-DTG-CA	0.25	0	0	0	-	-	0
Hist-ERNS-US	0.0625	0	0	-	-	-	0
Hist-FIFRA-US	0.25	0	0	0	-	-	0
Hist-FINDS-US	0.0625	0	0	-	-	-	0
Hist-HWS-CA	0.25	0	0	0	-	-	0
Hist-LUSTIS-CA	0.25	0	0	0	-	-	0
HIST-MLTS-US	0.25	0	0	0	-	-	0
HIST-MTBE-CA	0.25	0	0	0	-	-	0
Hist-NPL-US	0.25	0	0	0	-	-	0

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SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Orange-County-LF-CA	0.25	0	0	0	-	-	0
Historical-CA	0.5	0	0	0	0	-	0
Hist-Prop65-CA	0.25	0	0	0	-	-	0
Hist-RCRIS-US	0.25	0	0	0	-	-	0
Hist-Regional-LUST-CA	0.25	0	0	0	-	-	0
Hist-Regional-Other-CA	0.25	0	0	0	-	-	0
Hist-Regional-SLIC-CA	0.25	0	0	0	-	-	0
Hist-Regional-Spills-CA	0.25	0	0	0	-	-	0
Hist-Regional-SWLF-CA	0.25	0	0	0	-	-	0
Hist-Regional-UST-CA	0.25	0	0	0	-	-	0
Hist-SCL-CA	0.25	0	0	0	-	-	0
Hist-SWIS-CA	0.25	0	0	0	-	-	0
Hist-ToxicPits-CA	0.25	0	0	0	-	-	0
Hist-TRIS-US	0.25	0	0	0	-	-	0
Hist-US	0.0625	0	0	-	-	-	0
Hist-USGS-WaterWells-CA	0.0625	0	0	-	-	-	0
Hist-USTReg-CA	0.25	0	0	0	-	-	0
Hist-WaterWells-US	0.0625	0	0	-	-	-	0
Hist-WMUDS-CA	0.25	0	0	0	-	-	0
HWT-CA	0.25	0	0	0	-	-	0
ICIS-Air-US	0.0625	0	0	-	-	-	0
ICIS-FEC-US	0.0625	0	0	-	-	-	0
ICIS-NPDES-US	0.0625	0	0	-	-	-	0
LA-Waste-Haulers-CA	0.0625	0	0	-	-	-	0
Lead-Smelter-2-US	0.25	0	0	0	-	-	0
Lead-US	0.25	0	0	0	-	-	0
LMOP-US	0.5	0	0	0	0	-	0
Mines2-CA	0.0625	0	0	-	-	-	0
Mines-CA	0.0625	0	0	-	-	-	0
Mines-CDMG-CA	0.0625	0	0	-	-	-	0
MINES-US	0.0625	0	0	-	-	-	0
MLTS-US	0.0625	0	0	-	-	-	0
Mortgage-CA	0.25	0	0	0	-	-	0
MRDS-US	0.25	0	0	0	-	-	0
MWMP-CA	0.25	0	0	0	-	-	0
NEI-LF-CA	0.25	0	0	0	-	-	0
NPDES-CA	0.0625	0	0	-	-	-	0
NPDES-SW-CA	0.0625	0	0	-	-	-	0
OGM-CA	0.0625	0	0	-	-	-	0
OGW-CA	0.0625	0	0	-	-	-	0
OSCF-CA	0.5	0	0	0	0	-	0
PCS-US	0.25	0	0	0	-	-	0
Perch1-CA	0.25	0	0	0	-	-	0
Perch2-CA	0.25	0	0	0	-	-	0
RADINFO-US	0.0625	0	0	-	-	-	0
RFG-Lab-US	0.25	0	0	0	-	-	0
RMP-US	0.0625	0	0	-	-	-	0
ROD-US	0.5	0	0	0	0	-	0
SDWIS-US	0.25	0	0	0	-	-	0
Spills-SSO-CA	0.25	0	0	0	-	-	0
SSTS-US	0.0625	0	0	-	-	-	0
TierPer-CA	0.25	0	0	0	-	-	0
TOMS-CA	0.0625	0	0	-	-	-	0
Tribal-Air-US	0.25	0	0	0	-	-	0
TRIS2000-US	0.0625	0	0	-	-	-	0

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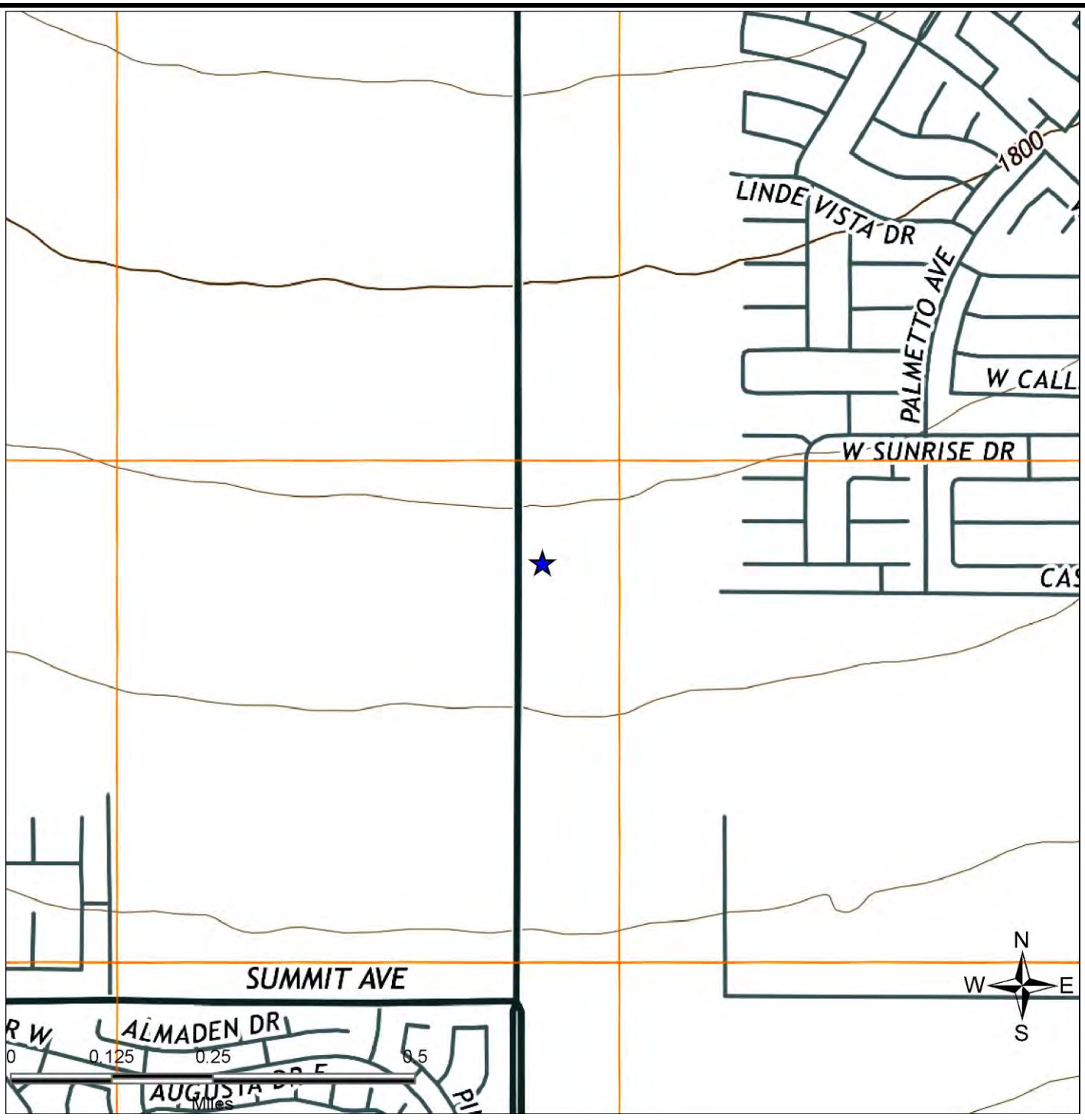
SUPPLEMENTAL DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
TRIS2010-US	0.0625	0	0	-	-	-	0
TRIS80-US	0.0625	0	0	-	-	-	0
TRIS90-US	0.0625	0	0	-	-	-	0
TSCA-US	0.0625	0	0	-	-	-	0
UIC2-CA	0.0625	0	0	-	-	-	0
UIC-CA	0.0625	0	0	-	-	-	0
UMTRA-US	0.0625	0	0	-	-	-	0
USGS-Waterwells-US	0.0625	0	0	-	-	-	0
Vapor-Intrusions-US	0.5	0	0	0	0	-	0
WDR-CA	0.25	0	0	0	-	-	0
Wells-CA	0.0625	0	0	-	-	-	0

PROPRIETARY HISTORIC DATABASES

DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Agriculture	0.0625	0	0	-	-	-	0
Hist-Auto Dealers	0.0625	0	0	-	-	-	0
Hist-Auto Repair	0.25	0	0	0	-	-	0
Hist-Chemical Manufacturing	0.0625	0	0	-	-	-	0
Hist-Chemical-Storage	0.0625	0	0	-	-	-	0
Hist-Cleaners	0.25	0	0	0	-	-	0
Hist-Convenience	0.0625	0	0	-	-	-	0
Hist-Disposal-Recycle	0.0625	0	0	-	-	-	0
Hist-Food-Processors	0.0625	0	0	-	-	-	0
Hist-Gun-Ranges	0.0625	0	0	-	-	-	0
Hist-Machine Shop	0.0625	0	0	-	-	-	0
Hist-Manufacturing	0.0625	0	0	-	-	-	0
Hist-Metal Plating	0.0625	0	0	-	-	-	0
Hist-Mining	0.0625	0	0	-	-	-	0
Hist-Mortuaries	0.0625	0	0	-	-	-	0
Hist-Oil-Gas	0.0625	0	0	-	-	-	0
Hist-OilGas-Refiners	0.0625	0	0	-	-	-	0
Hist-Other	0.0625	0	0	-	-	-	0
Hist-Paint-Stores	0.0625	0	0	-	-	-	0
Hist-Petroleum	0.0625	0	0	-	-	-	0
Hist-Post-Offices	0.0625	0	0	-	-	-	0
Hist-Printers	0.0625	0	0	-	-	-	0
Hist-Rental	0.0625	0	0	-	-	-	0
Hist-RV-Dealers	0.0625	0	0	-	-	-	0
Hist-Salvage	0.0625	0	0	-	-	-	0
Hist-Service Stations	0.25	0	0	0	-	-	0
Hist-Steel-Metals	0.0625	0	0	-	-	-	0
Hist-Textile	0.0625	0	0	-	-	-	0
Hist-Transportation	0.0625	0	0	-	-	-	0
Hist-Trucking	0.0625	0	0	-	-	-	0
Hist-Vehicle-Parts	0.0625	0	0	-	-	-	0
Hist-Vehicle-Washing	0.0625	0	0	-	-	-	0

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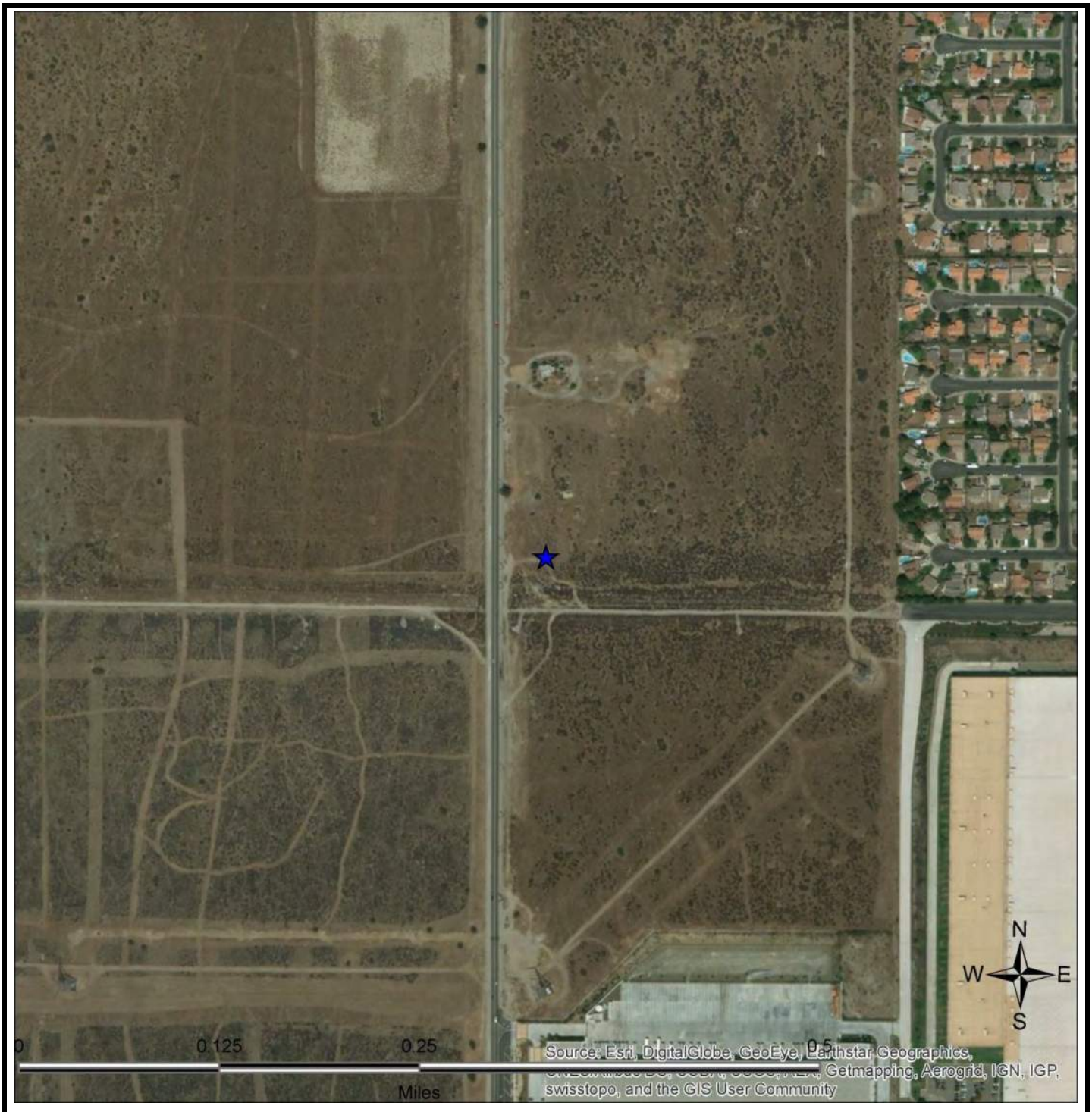


SITE LOCATION TOPOGRAPHIC MAP

U.S. Geological Survey. Devore (2015-03-17) Quadrangle, 7.5 Minute Series

S&S Commercial Environmental Services, Inc.	Ne Corner Of N Sierra Ave And W Casa Grande Drive, Apn 0239-151-40 Fontana, CA 92336	FIGURE: 1 JOB: 2104692173 DATE: 1/19/2018

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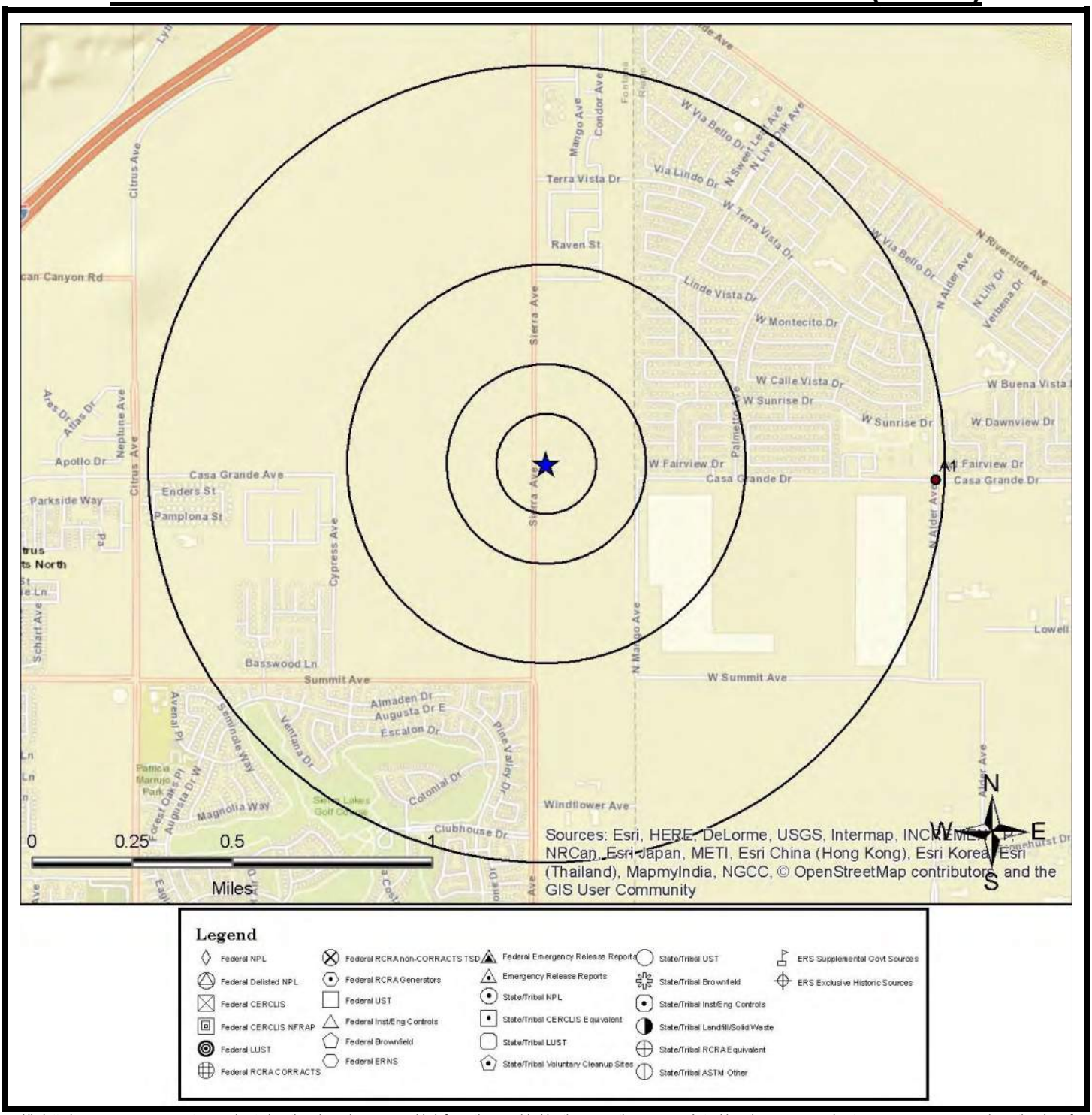


SITE LOCATION MAP

S&S Commercial Environmental Services, Inc.	Ne Corner Of N Sierra Ave And W Casa Grande Drive, Apn 0239-151-40 Fontana, CA 92336	FIGURE: 2 JOB: 2104692173 DATE: 1/19/2018

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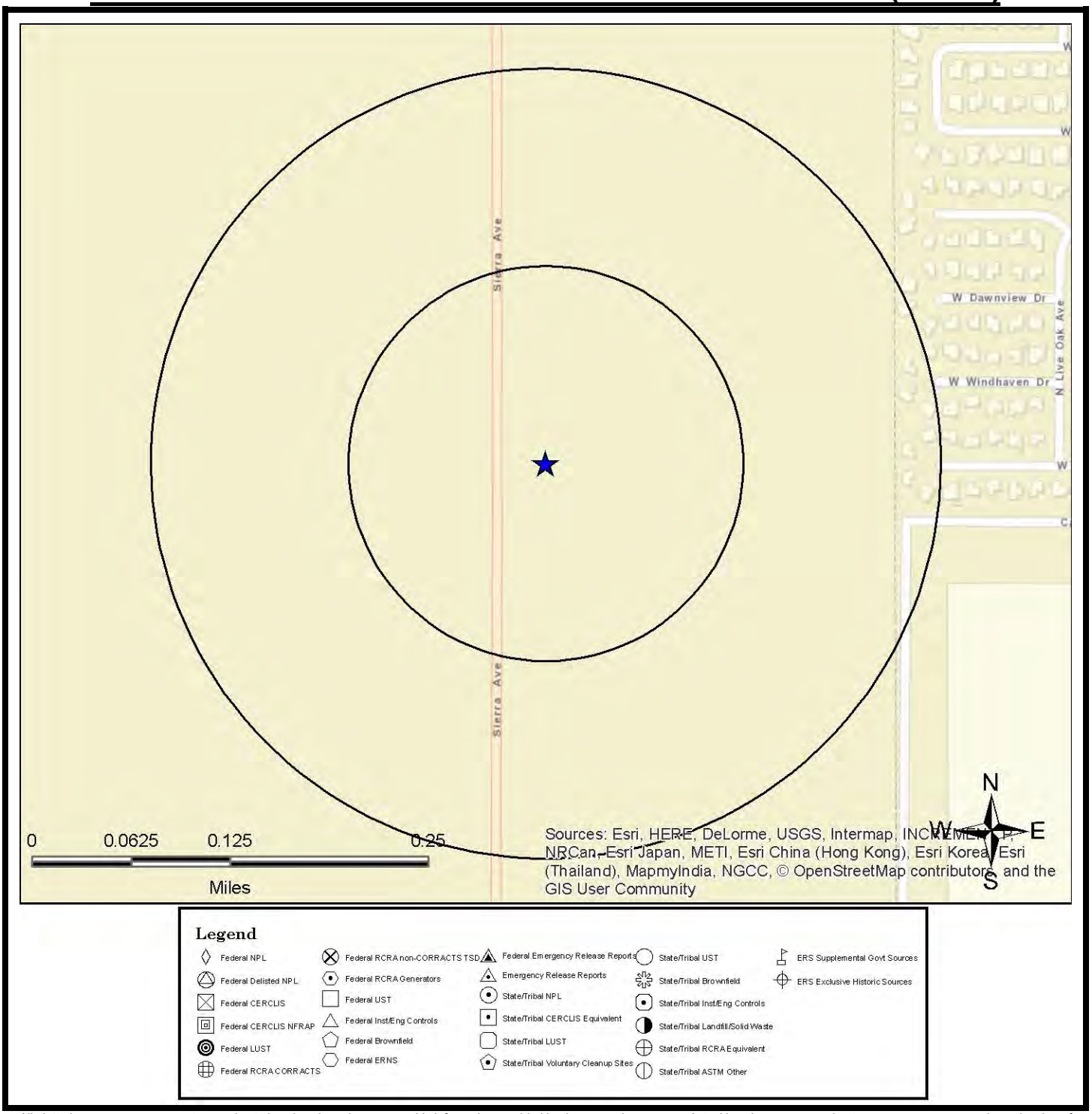
1-MILE RADIUS STREET MAP W/OCCURRENCES (MAP1)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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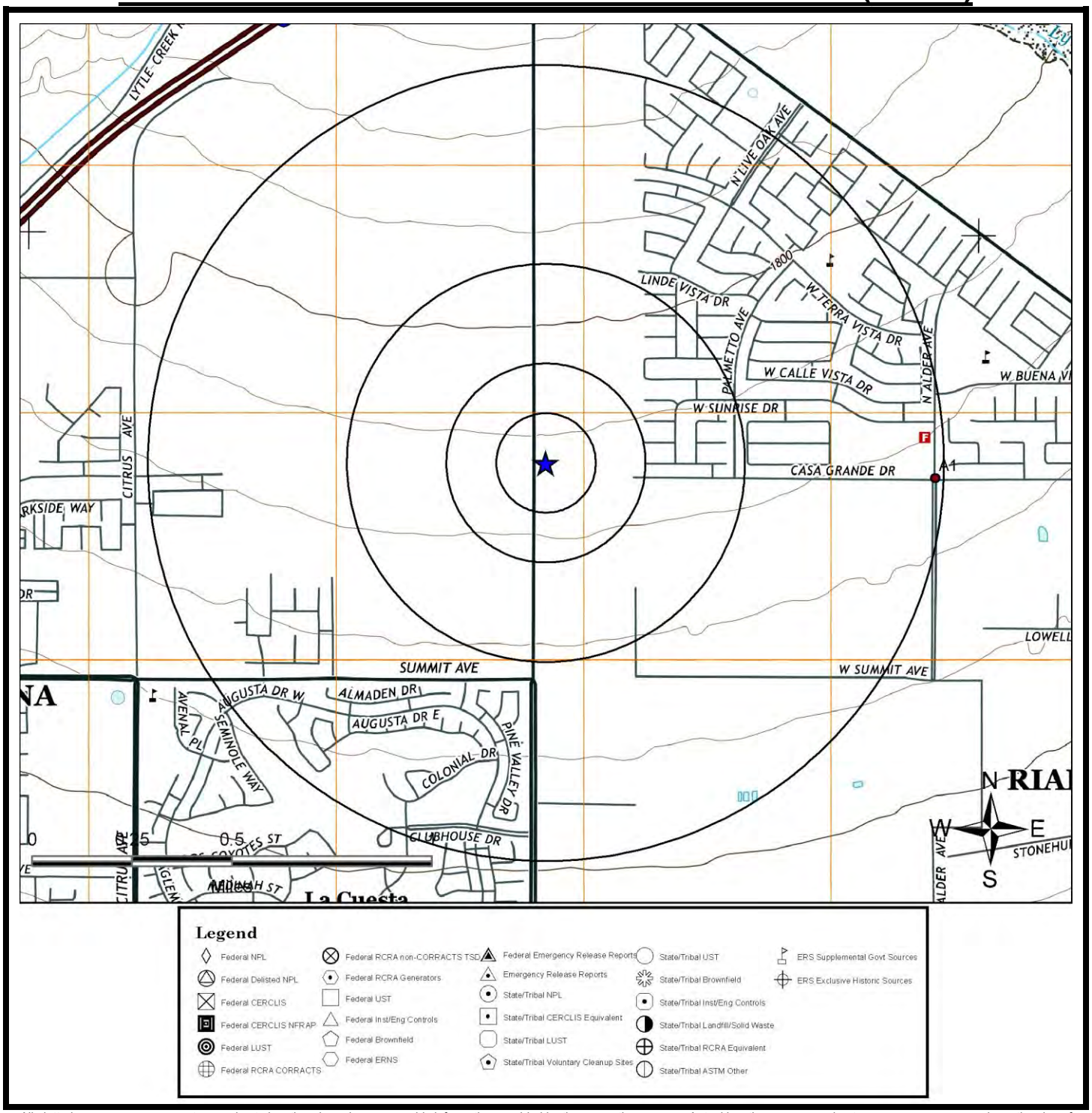
0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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1-MILE TOPOGRAPHIC MAP W/OCCURRENCES (MAP3)

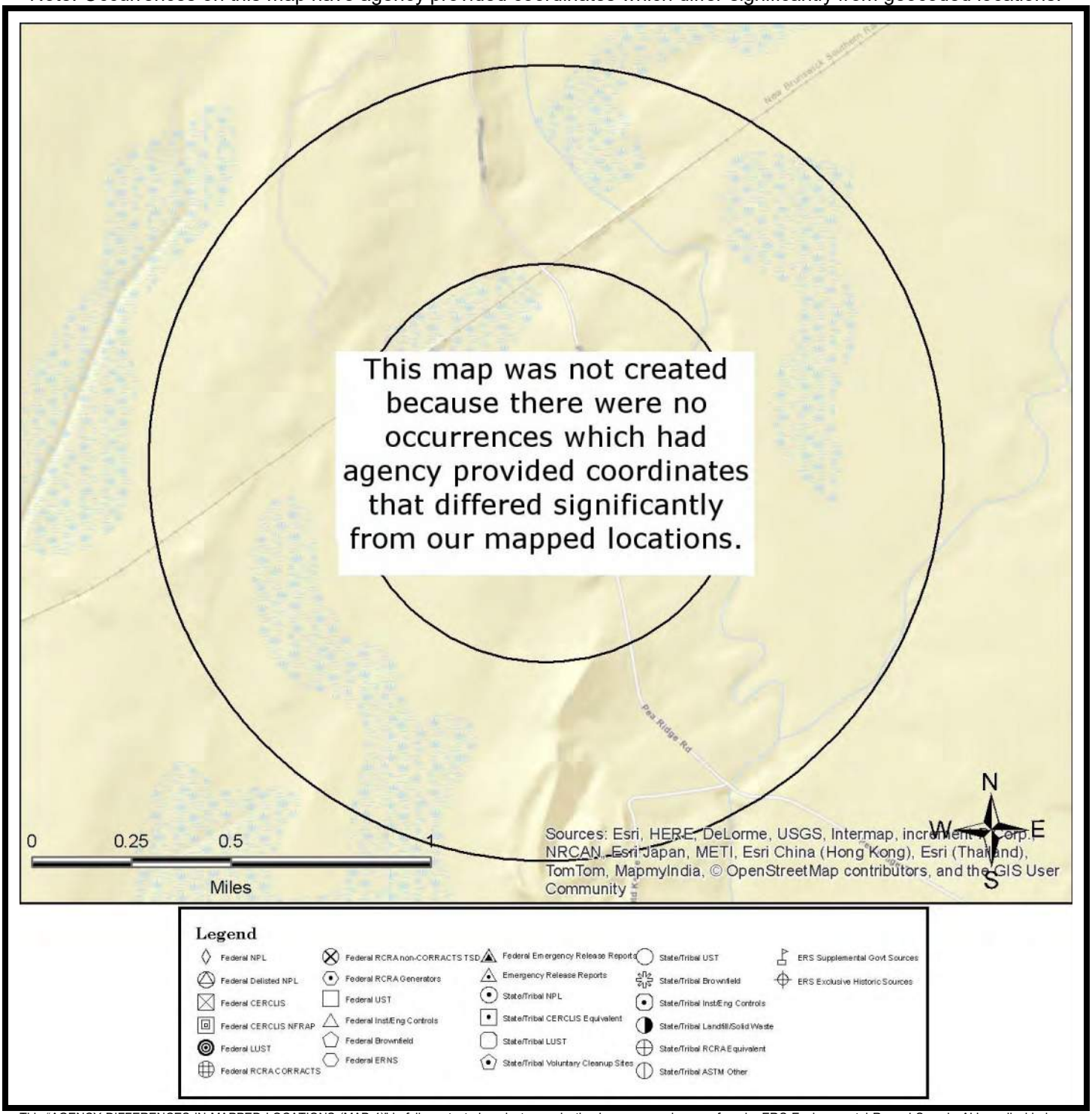


All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP4)

Note: Occurrences on this map have agency provided coordinates which differ significantly from geocoded locations.



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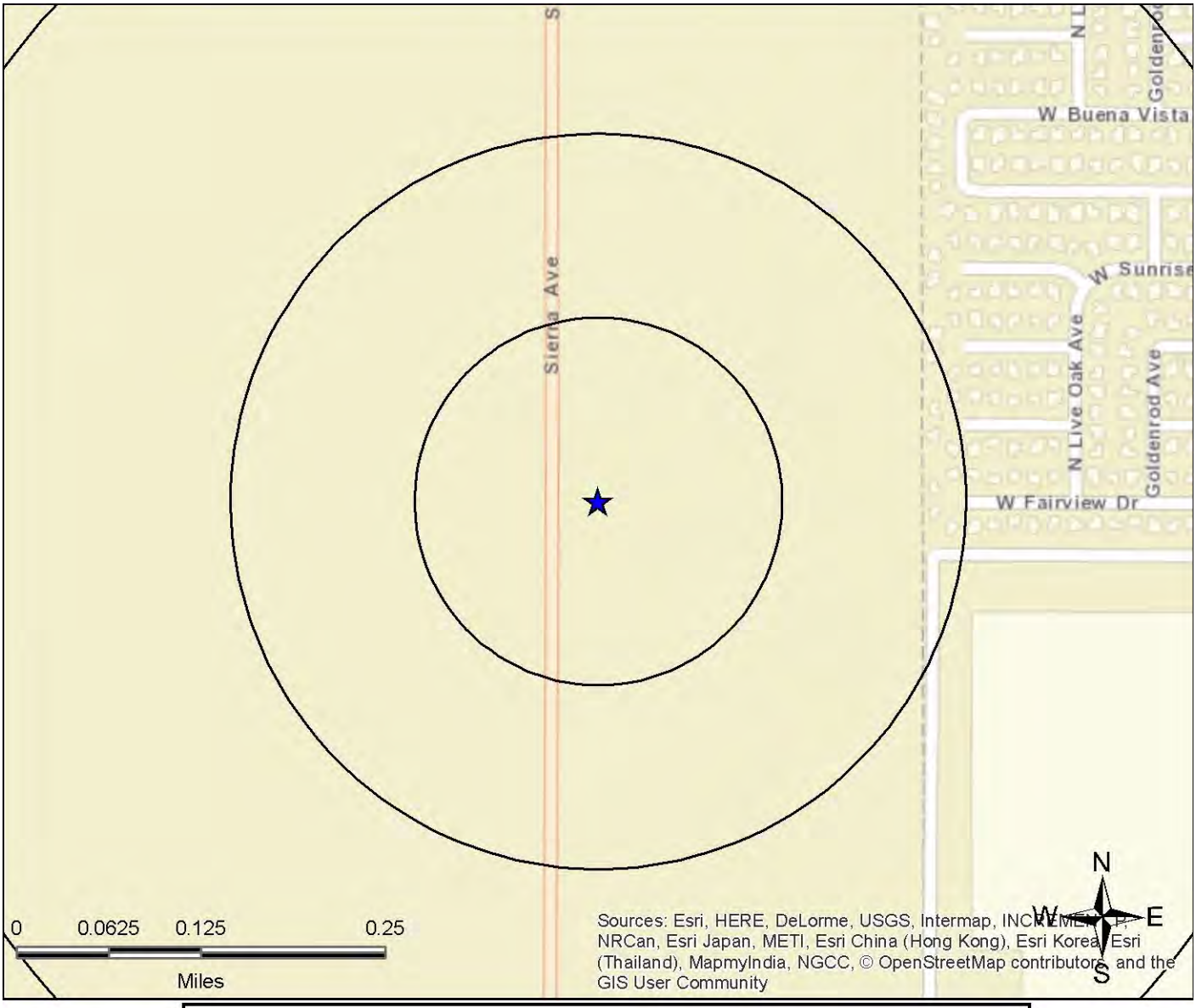
SUMMARY OF AGENCY DIFFERENCES

MAP ID	ID / SITE NAME	ADDRESS / DATABASE	AGENCY COORDINATES	DISTANCE (MILES)	DIRECTION
N/A	No occurrences were identified where the agency provided coordinates that differed significantly from our mapped locations.				

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MAPPED AIR PERMITS WITH POTENTIAL DISPERSION (MAP5)

Note: Occurrences on this map are reported in Air Quality databases. Potential air plumes are drawn in the direction of the prevailing wind.
No air quality occurrences were identified in the search raddius



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency/source. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Potential air dispersion plumes are depicted to graphically show the direction contaminates may travel based on prevailing wind data and provide a visual screening tool only. Actual direction will vary especially by season. Depending on the actual contaminate, amount released, and other variables, the distance from the source the contaminate may travel can and will vary. Interpretation and review of all the actual relevant data by an environmental professional is recommended before making any decisions, conclusions or otherwise based on the map depictions, air data, and potential air dispersion plumes.

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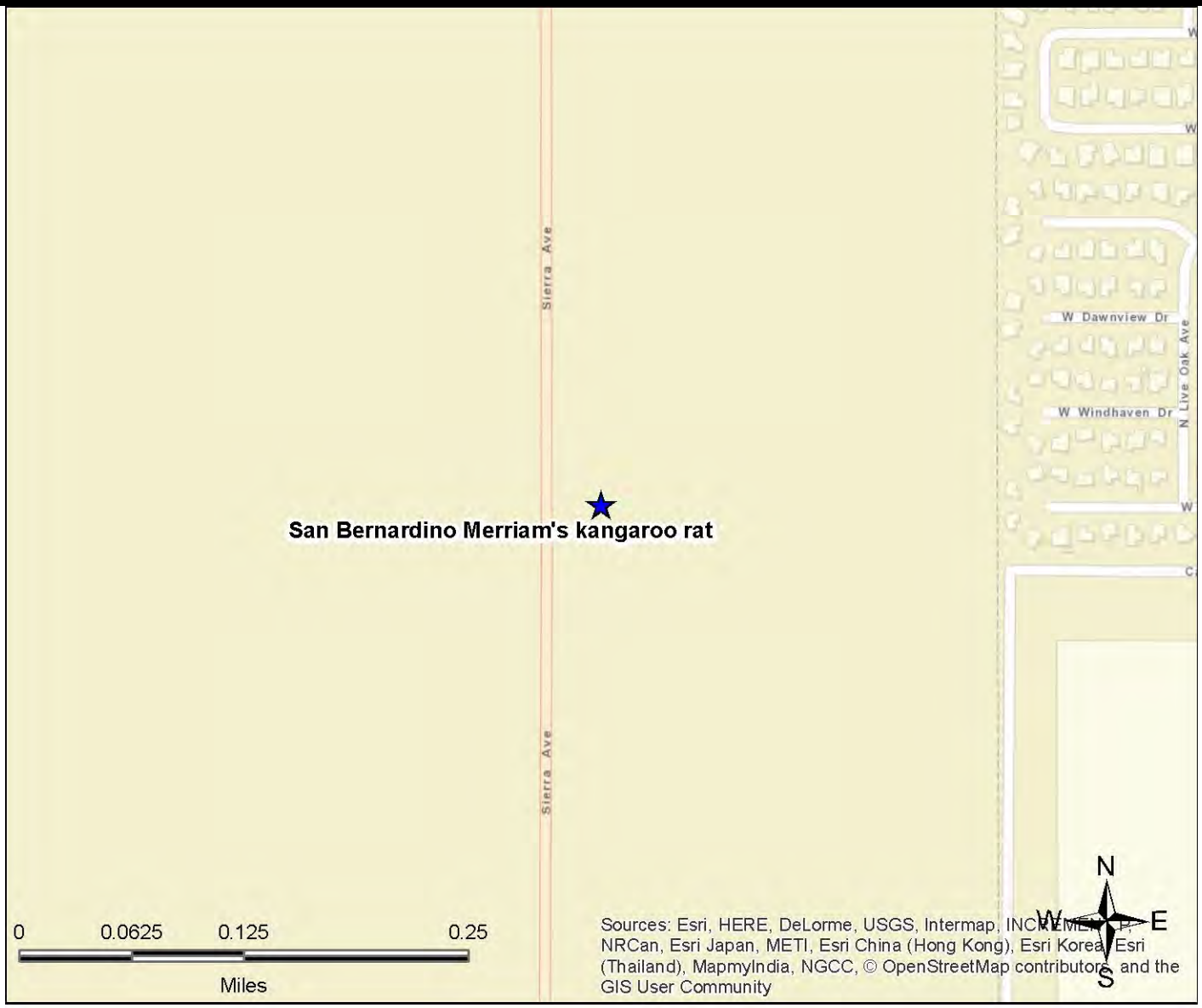
POTENTIAL AREAS OF CONCERN/CONTAMINATION (MAP6)

Note: Locations shown may represent site boundaries, contamination plumes, or other information. See descriptions in the Listed Occurrence Details for more information.



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US FISH & WILDLIFE SERVICE, CRITICAL HABITATS



All plotted polygons represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc.

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LISTED OCCURRENCE DETAILS

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
NPL-R9-US	Currently on the Final NPL	0.98 miles E	N/A	A1
SITE NAME			**MAPS**	**ID**
B.F. GOODRICH			6	245
ADDRESS			**CITY**	**ZIP**
3196 NORTH LOCUST			RIALTO	

DETAILS

Site URL: http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0905945
NPL Status: Currently on the Final NPL
Cerclis ID: CAN000905945
NPL Name: B.F. GOODRICH
SubArea Name: Not Reported
Boundary Type: Site Boundary
Federal Facility Status: Private Site
COMMENTS: Not Reported
COUNTY: SAN BERNARDINO
SOURCE: GIS CENTER
Category Code: MP
Category Code Description: Manufacturing - Processing - Maintenance
Site sub-category code: OP
Site-sub category description: Ordnance Production
Human Exposure Status: Current Human Exposure Controlled
Site Status: Design Underway
EIS Human: HEUC

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RECORDS SOURCES SEARCHED

ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Air-CA	Air Permits with Emissions	ERS Supplemental Govt Sources	Click Here	None Found
AIR-DIST-CA	Air Pollution Control District	ERS Supplemental Govt Sources	Click Here	None Found
AST-CA	Aboveground Storage Tanks	State/Tribal UST	Click Here	None Found
AST-CRSP-CA	Aboveground Storage Tanks	State/Tribal UST	Click Here	None Found
BF-MOA-CA	Brownfield MOA Sites (aka Considered Brownfield Sites, SWRCB MOA, Brownfield Memorandum of Agreement)	State/Tribal Brownfield	Click Here	None Found
BF-Tribal-US	Tribal Brownfields	Federal Brownfield	Click Here	None Found
BF-US	Brownfields Sites	Federal Brownfields	Click Here	None Found
BioFuel-US	Bio Diesel Fuel	ERS Supplemental Govt Sources	Click Here	None Found
BZ-HazWaste-CA	Border Zone or Hazardous Waste Property	State/Tribal ASTM Other	Click Here	None Found
CDL-CA	Clandestine Drug Labs	ERS Supplemental Govt Sources	Click Here	None Found
CDL-US	National Clandestine Drug Lab Register	ERS Supplemental Govt Sources	Click Here	None Found
CERCLIS-Archived-US	CERCLIS sites that have been archived	Federal CERCLIS NFRAP	Click Here	None Found
CERCLIS-US	Comprehensive Environmental Response, Compensation, and Liability Information System	Federal CERCLIS	Click Here	None Found
CERS-CA	California Environmental Reporting System (CERS)	State/Tribal ASTM Other	Click Here	None Found
CHMIRS-CA	California Hazardous Material Incident Report System	Emergency Release Reports	Click Here	None Found
CHWF-CA	Commercial Offsite Hazardous Waste Facilities	ERS Supplemental Govt Sources	Click Here	None Found
City-AST-CA	Underground Storage Tanks	State/Tribal UST	Click Here	None Found
City-CUPA-CA	Certified Unified Program Agency	State/Tribal ASTM Other	Click Here	None Found
City-Others-CA	Hazardous Material Facilities	State/Tribal ASTM Other	Click Here	None Found
City-UST-CA	City Agency Underground Storage Tanks	State/Tribal UST	Click Here	None Found
Cleaners-CA	Cleaners	ERS Supplemental Govt Sources	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Coal-Ash-Dams-US	Coal Ash Contaminated Sites and Hazard Dams	ERS Supplemental Govt Sources	Click Here	None Found
Controls-CA	California sites with Deed Restrictions or other Controls	State/Tribal Inst/Eng Controls	Click Here	None Found
Controls-RCRA-US	RCRA Institutional and Engineering Controls Summary (aka Federal RCRA with Controls)	Federal Institutional/Engineering Controls	Click Here	None Found
Controls-US	US CERCLA Sites with Controls (aka US IC/EC, Institutional/Engineering List Controls, Land Use Controls)	Federal Institutional/Engineering Controls	Click Here	None Found
CorAct-Closed-CA	Corrective Action Sites	State/Tribal ASTM Other	Click Here	None Found
CorAct-Open-CA	Corrective Action Sites	State/Tribal ASTM Other	Click Here	None Found
CORTESE-CA	Cortese Hazardous Waste & Substances Sites List	State/Tribal ASTM Other	Click Here	None Found
County-AST-CA	Aboveground Storage Tanks	State/Tribal UST	Click Here	None Found
County-BI-CA	Business Inventory	ERS Supplemental Govt Sources	Click Here	None Found
County-Hist-CA	Historic County Listings	State/Tribal ASTM Other	Click Here	None Found
County-LUST-CA	County Agency Leaking Underground Storage Tanks	State/Tribal LUST	Click Here	None Found
County-LUST-Closed-CA	County Agency Leaking Underground Storage Tanks, Closed Cases	State/Tribal LUST	Click Here	None Found
County-LUST-Open-CA	County Agency Leaking Underground Storage Tanks, Open Cases	State/Tribal LUST	Click Here	None Found
County-Others-CA	Various County Files	State/Tribal ASTM Other	Click Here	None Found
County-SLIC-Closed-CA	County SLIC Sites	Emergency Release Reports	Click Here	None Found
County-SLIC-Open-CA	County SLIC Sites	Emergency Release Reports	Click Here	None Found
County-SML-CA	County Site Mitigation Unit List	State/Tribal ASTM Other	Click Here	None Found
County-SWF-CA	County Solid Waste Facilities	State/Tribal Landfill/Solid Waste	Click Here	None Found
County-UST-CA	County Agency Underground Storage Tanks	State/Tribal UST	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
CRSP-CA	Cal EPA Regulated Site Portal	State/Tribal UST	Click Here	None Found
CUPA-CA	Certified Unified Program Agency	State/Tribal ASTM Other	Click Here	None Found
Dams-CA	California Dams	ERS Supplemental Govt Sources	Click Here	None Found
Debris-US	Debris Sites	Federal Solid Waste	Click Here	None Found
Deed-CA	Deed Restrictions/Land Use Restrictions	State/Tribal Inst/Eng Controls	Click Here	None Found
Delisted-NPL-US	Delisted NPL Sites	Federal Delisted NPL	Click Here	None Found
DPR-CA	Pesticide Regulation Licenses	ERS Supplemental Govt Sources	Click Here	None Found
DryCleaners-CA	Dry Cleaner Facilities	ERS Supplemental Govt Sources	Click Here	None Found
EGRID-US	Emissions & Generation Resource Facilities	ERS Supplemental Govt Sources	Click Here	None Found
ENF-CA	Enforcement Actions Data	State/Tribal ASTM Other	Click Here	None Found
ENF-SMARTS-CA	Storm Water Enforcement Actions	State/Tribal ASTM Other	Click Here	None Found
ENF-Wastewater-CA	Wastewater Enforcement Actions	State/Tribal ASTM Other	Click Here	None Found
EPA-Watch-List-US	EPA Watch List	ERS Supplemental Govt Sources	Click Here	None Found
ERNS-US	Emergency Response Notification System	Federal ERNS	Click Here	None Found
Eval-Hist-CA	EnviroStor Evaluation History Sites	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
Eval-Hist-NFA-CA	EnviroStor Database Evaluation History NFA Sites	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
FA-HW-CA	Financial Assurance, Hazardous Waste	ERS Supplemental Govt Sources	Click Here	None Found
FA-HW-US	Financial Assurance, Hazardous Waste	ERS Supplemental Govt Sources	Click Here	None Found
FA-SWF-CA	Financial Assurance, Solid Waste Facilities	ERS Supplemental Govt Sources	Click Here	None Found
FEMA-UST-US	FEMA Underground Storage Tanks	Federal UST	Click Here	None Found
FRS-US	Facility Registry Index (FINDS)	ERS Supplemental Govt Sources	Click Here	None Found
FTTS-ENF-US	FIFRA/TSCA Tracking System (FTTS) Enforcement Actions	Federal ASTM Other	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
FTTS-INSP-US	FIFRA/TSCA Tracking System (FTTS) Inspections	ERS Supplemental Govt Sources	Click Here	None Found
FUDS-US	Formerly Used Defense Sites	ERS Supplemental Govt Sources	Click Here	None Found
FUSRAP-US	Formerly Utilized Sites Remedial Action Program Sites	ERS Supplemental Govt Sources	Click Here	None Found
Haulers-CA	Registered Waste Tire Haulers Listing	ERS Supplemental Govt Sources	Click Here	None Found
HazWaste-CA	Hazardous Waste Facilities	State/Tribal ASTM Other	Click Here	None Found
Hist-AFS2-US	Air Facility System for Clean Air Act stationary sources	ERS Supplemental Govt Sources	Click Here	None Found
Hist-AFS-US	Air Facility System for Clean Air Act stationary sources	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Agriculture	Ranches/Farms, Livestock/Agriculture	ERS Exclusive Historic Sources	Click Here	None Found
Hist-AST-CA	Historical Aboveground Storage Tanks	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Auto Dealers	Auto and Truck Dealers	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Auto Repair	Automotive Repair	ERS Exclusive Historic Sources	Click Here	None Found
Hist-AWS-CA	Annual Workplan Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-CA	Previously Listed California Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-CalFID-CA	Facility Inventory Database	ERS Supplemental Govt Sources	Click Here	None Found
Hist-CALSITES-CA	Calsites Database	ERS Supplemental Govt Sources	Click Here	None Found
Hist-CERCLIS-NFRAP-US	CERCLIS-NFRAP	ERS Supplemental Govt Sources	Click Here	None Found
Hist-CERCLIS-US	CERCLIS Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Chemical Manufacturing	Manufacturing and Distribution of Chemicals, Gases, and/or Solids	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Chemical-Storage	Chemical/Hazardous Use Storage	ERS Exclusive Historic Sources	Click Here	None Found
Hist-City-UST-CA	Underground Storage Tanks	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Cleaners	Laundry, Cleaners, and Dry Cleaning Services	ERS Exclusive Historic Sources	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Hist-Controls-CA	Previous Restricted Use Sites	State/Tribal Inst/Eng Controls	Click Here	None Found
Hist-Convenience	Convenience Store with Possible Gas	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Cort-CA	Historical Cortese list	State/Tribal ASTM Other	Click Here	None Found
Hist-Deed-CA	Deed Restriction Properties	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Disposal-Recycle	Hazardous Disposal/Recycle and Dumps/Waste	ERS Exclusive Historic Sources	Click Here	None Found
Hist-DTG-CA	Depth to Groundwater	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Dumps-US	Dumps Inventory of 1985	Federal Solid Waste	Click Here	None Found
Hist-ERNS-US	Emergency Response Notification System (ERNS)	ERS Supplemental Govt Sources	Click Here	None Found
Hist-FIFRA-US	Case Administration Data from National Compliance Database (Federal Insecticide, Fungicide, and Rodenticide Act)	ERS Supplemental Govt Sources	Click Here	None Found
Hist-FINDS-US	Facility Index System	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Food-Processors	Food Processing Manufacturers	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Gun-Ranges	Gun Ranges/Clubs	ERS Exclusive Historic Sources	Click Here	None Found
Hist-HWS-CA	Cortese List-Hazardous Waste Substance Site List	ERS Supplemental Govt Sources	Click Here	None Found
Hist-LUSTIS-CA	Lust Information System (LUSTIS)	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Machine Shop	Machine Shops, Welding, Machine Repair	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Manufacturing	Historic Sources US: Manufacturing	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Metal Plating	Metal Plating	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Mining	Mining Operations	ERS Exclusive Historic Sources	Click Here	None Found
HIST-MLTS-US	Material Licensing Tracking System	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Mortuaries	Crematories/Mortuaries	ERS Exclusive Historic Sources	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
HIST-MTBE-CA	Historical Sites With MTBE (Methyl Tertiary-Butyl Ether) Contamination	ERS Supplemental Govt Sources	Click Here	None Found
Hist-NPL-US	National Priority List	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Oil-Gas	Oil and Gas Well Related Facilities	ERS Exclusive Historic Sources	Click Here	None Found
Hist-OilGas-Refiners	Oil/Gas Refiners/Manufacturers/Plants	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Orange-County-LF-CA	Orange County Landfills	ERS Supplemental Govt Sources	Click Here	None Found
Historical-CA	Historical Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Other	Environmental Facilities	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Paint-Stores	Paint Stores	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Petroleum	Petroleum Refining/ Manufacturing/ Chemicals	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Post-Offices	Post Offices	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Printers	Printers and Publishers	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Prop65-CA	Historical Prop 65 Sites	ERS Supplemental Govt Sources	Click Here	None Found
HIST-R4-CA	Historical sites	State/Tribal ASTM Other	Click Here	None Found
Hist-RCRIS-US	EPA's Resource Conservation and Recovery Act	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Regional-LUST-CA	Leaking Underground Storage Tanks	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Regional-Other-CA	Toxic Lists, Site Mitigation, and Groundwater Cleanup Program	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Regional-SLIC-CA	List of Spills and Leak Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Regional-Spills-CA	Industrial Cleanup Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Regional-SWLF-CA	County Landfills and Transfer Stations	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Regional-UST-CA	Underground Storage Tanks	ERS Supplemental Govt Sources	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Hist-Rental	Rental Equipment & Yards	ERS Exclusive Historic Sources	Click Here	None Found
Hist-RV-Dealers	Trailer and Recreational Vehicle Dealers	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Salvage	Vehicle Salvage Yards or Wreckers	ERS Exclusive Historic Sources	Click Here	None Found
Hist-SCL-CA	California Cerclis Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Service Stations	Service Stations/Vehicle Fueling	ERS Exclusive Historic Sources	Click Here	None Found
HIST-SLIC-CV-CLOSED-CA	Central Valley Spills and Leak Sites	Emergency Release Reports	Click Here	None Found
HIST-SLIC-CV-OPEN-CA	Central Valley Spills and Leak Sites	Emergency Release Reports	Click Here	None Found
Hist-Steel-Metals	Steel Mills/Manufacturers/Foundries/Smelters	ERS Exclusive Historic Sources	Click Here	None Found
Hist-SWF-CA	Previous listed Solid Waste Facilities	State/Tribal Landfill/Solid Waste	Click Here	None Found
Hist-SWIS-CA	Solid Waste Information System (SWIS)	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Textile	Textile Mills/Manufacturers	ERS Exclusive Historic Sources	Click Here	None Found
Hist-ToxicPits-CA	Toxic Pits Cleanup Facilities	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Transportation	Transportation Facilities	ERS Exclusive Historic Sources	Click Here	None Found
Hist-TRIS-US	Toxic Release Inventory System	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Trucking	Trucking, Shipping, Delivery, and/or Storage	ERS Exclusive Historic Sources	Click Here	None Found
Hist-US	Previously Listed Federal Sites	ERS Supplemental Govt Sources	Click Here	None Found
Hist-US-EC	Historic Engineering Controls Sites (aka US EC, Engineering Controls, Land Use Controls)	Federal Institutional/Engineering Controls	Click Here	None Found
Hist-USGS-WaterWells-CA	Ground Water Site Inventory for California	ERS Supplemental Govt Sources	Click Here	None Found
Hist-US-IC	Sites with Institutional Controls (aka US IC, Institutional Controls, Land Use Controls)	Federal Institutional/Engineering Controls	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Hist-UST-CA	HISTORICAL HAZARDOUS SUBSTANCE STORAGE INFORMATION (aka Historical Underground Storage Tanks)	State/Tribal UST	Click Here	None Found
Hist-UST-Cleanup-CA	Historic UST Cases Recommended for Closure under UST Cleanup Fund 5 Year Review (aka UST Cleanup Fund Cases)	State/Tribal LUST	Click Here	None Found
Hist-USTReg-CA	Underground Storage Tank Registrations Database	ERS Supplemental Govt Sources	Click Here	None Found
Hist-Vehicle-Parts	Vehicle Parts	ERS Exclusive Historic Sources	Click Here	None Found
Hist-Vehicle-Washing	Vehicle/Truck Washing Facilities	ERS Exclusive Historic Sources	Click Here	None Found
Hist-WaterWells-US	Public Community Water Supply/Well Head Protection Database	ERS Supplemental Govt Sources	Click Here	None Found
Hist-WIP-Active-CA	Well Investigation Program Case List, Active Sites (aka WIP)	State/Tribal ASTM Other	Click Here	None Found
Hist-WIP-Backlog-CA	Well Investigation Program Case List, Backlog Sites (aka WIP)	State/Tribal ASTM Other	Click Here	None Found
Hist-WIP-Historical-CA	Well Investigation Program Case List, Historical Sites (aka WIP)	State/Tribal ASTM Other	Click Here	None Found
Hist-WMUDS-CA	Waste Management Unit Database System	ERS Supplemental Govt Sources	Click Here	None Found
HMIS-US	Hazardous Materials Information System	Federal Emergency Release Reports	Click Here	None Found
HWIS-CA	Hazardous Waste Information Summary	State/Tribal RCRA Equivalent	Click Here	None Found
HWMP-Controls-CA	Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction	State/Tribal Inst/Eng Controls	Click Here	None Found
HWT-CA	Hazardous Waste Transporters	ERS Supplemental Govt Sources	Click Here	None Found
ICE-CA	Inspection, Compliance, and Enforcement	State/Tribal ASTM Other	Click Here	None Found
ICIS-Air-US	Integrated Compliance Information System for Air	ERS Supplemental Govt Sources	Click Here	None Found
ICIS-FEC-US	Integrated Compliance Information System for Federal Enforcement Data	ERS Supplemental Govt Sources	Click Here	None Found
ICIS-NPDES-US	National Pollutant Discharge Elimination System (NPDES)	ERS Supplemental Govt Sources	Click Here	None Found
LA-LF-CA	Los Angeles County Landfills	State/Tribal Solid Waste	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Land-Disposal-CA	Geotracker - Land Disposal Sites (aka Landfills, LDS)	State/Tribal Landfill/Solid Waste	Click Here	None Found
LA-Waste-Haulers-CA	Waste Haulers	ERS Supplemental Govt Sources	Click Here	None Found
Lead-Smelter-2-US	Lead Smelter Sites	ERS Supplemental Govt Sources	Click Here	None Found
Lead-US	Lead Smelter Sites	ERS Supplemental Govt Sources	Click Here	None Found
Liens-CA	Environmental Liens	State/Tribal Inst/Eng Controls	Click Here	None Found
LIENS-US	Superfund Liens	Federal Institutional/Engineering Controls	Click Here	None Found
LMOP-US	Landfill Methane Outreach Program	ERS Supplemental Govt Sources	Click Here	None Found
LUST-Closed-CA	Geotracker - Leaking Underground Storage Tanks, Closed Cases	State/Tribal LUST	Click Here	None Found
LUST-Open-CA	Geotracker - Leaking Underground Storage Tanks, Open Cases	State/Tribal LUST	Click Here	None Found
Manifest2-RI	Hazardous Waste Manifest	State/Tribal RCRA Equivalent	Click Here	None Found
MethaneLF-CA	Methane Producing Landfills	State/Tribal Other	Click Here	None Found
Military-Active-CA	EnviroStor Database Military Active Sites (aka MCS)	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
Military-Bases-US	Military Base Boundaries	ERS Supplemental Govt Sources	Click Here	None Found
Military-NFA-CA	EnviroStor Database Military Active Sites (aka MCS)	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
Military-Other-CA	EnviroStor Database Military Active Sites (aka MCS)	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
Mines2-CA	California Mines	ERS Supplemental Govt Sources	Click Here	None Found
Mines-CA	Death Valley Mines	ERS Supplemental Govt Sources	Click Here	None Found
Mines-CDMG-CA	California Division of Mines and Geology	ERS Supplemental Govt Sources	Click Here	None Found
MINES-US	Mines Master Index File	ERS Supplemental Govt Sources	Click Here	None Found
MLTS-US	Material Licensing Tracking System	ERS Supplemental Govt Sources	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Mortgage-CA	Cal Mortgage Facilities	ERS Supplemental Govt Sources	Click Here	None Found
MRDS-US	Mineral Resources Data System (MRDS)	ERS Supplemental Govt Sources	Click Here	None Found
MWMP-CA	Medical Waste Management Program	ERS Supplemental Govt Sources	Click Here	None Found
NEI-LF-CA	NEI (National Emission Inventory) Landfill Point Sources	ERS Supplemental Govt Sources	Click Here	None Found
NPDES-CA	National Pollutant Discharge Elimination System	ERS Supplemental Govt Sources	Click Here	None Found
NPDES-SW-CA	Notice of Intent Data	ERS Supplemental Govt Sources	Click Here	None Found
NPL-R9-US	NPL Region 9 Site Boundaries	Federal NPL	Click Here	1
NPL-US	National Priorities List	Federal NPL	Click Here	None Found
OGM-CA	Oil and Gas Monitoring	ERS Supplemental Govt Sources	Click Here	None Found
OGW-CA	California Oil and Gas Wells	ERS Supplemental Govt Sources	Click Here	None Found
OSCF-CA	Orphan Site Cleanup Fund	ERS Supplemental Govt Sources	Click Here	None Found
PADS-US	PCB Registration Database System	Federal ASTM Other	Click Here	None Found
PCB-US	PCB Transformers	Federal ASTM Other	Click Here	None Found
PCS-US	Permit Compliance System for Clean Water Act	ERS Supplemental Govt Sources	Click Here	None Found
Perch1-CA	Perchlorate Confirmed Contaminant Sites	ERS Supplemental Govt Sources	Click Here	None Found
Perch2-CA	Perchlorate Confirmed Contaminant Sites	ERS Supplemental Govt Sources	Click Here	None Found
PR-MOA-CA	Polanco Redevelopment MOA Sites	State/Tribal ASTM Other	Click Here	None Found
Proposed-NPL-US	Proposed NPL Sites	Federal NPL	Click Here	None Found
RADINFO-US	Radiation Information Database	ERS Supplemental Govt Sources	Click Here	None Found
RCRA-CESQG-US	Resource Conservation and Recovery Act, Conditionally Exempt Small Quantity Generators (aka RCRA CESQG)	Federal RCRA Generators	Click Here	None Found
RCRA-COR-US	Resource Conservation and Recovery Act, - Corrective Actions (aka RCRA CORRACTS)	Federal RCRA CORRACTS	Click Here	None Found
RCRA-LQG-US	Resource Conservation and Recovery Act, Large Quantity Generators (aka RCRA LQG)	Federal RCRA Generators	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
RCRA-NON-US	Resource Conservation and Recovery Act, Non-Hazardous Generators (aka RCRA Non-Haz, RCRA NonGen, RCRA No longer Regulated)	Federal RCRA Generators	Click Here	None Found
RCRA-SQG-US	Resource Conservation and Recovery Act, Small Quantity Generators (aka RCRA SQG)	Federal RCRA Generators	Click Here	None Found
RCRA-TSDF-US	Resource Conservation and Recovery Act -, Treatment, Storage, and Disposal Facilities (aka RCRA TSD, RCRA TSDF)	Federal RCRA non-CORRACTS TSD	Click Here	None Found
Response-CA	State Response Sites and National Priorities List (NPL)	State/Tribal NPL	Click Here	None Found
RFG-Lab-US	Reformulated Gasoline (RFG)	ERS Supplemental Govt Sources	Click Here	None Found
RMP-US	Risk Management Plans	ERS Supplemental Govt Sources	Click Here	None Found
ROD-US	Records of Decision	ERS Supplemental Govt Sources	Click Here	None Found
SAA-Agreements-US	Sites with Superfund Alternative Approach Agreements	Federal ASTM Other	Click Here	None Found
School-Active-CA	EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
School-NFA-CA	EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
School-Other-CA	EnviroStor Database School Active Sites (aka School Property Evaluation Program, SCH)	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
SDWIS-US	Safe Drinking Water Information System	ERS Supplemental Govt Sources	Click Here	None Found
SGV-Deep-Plumes-CA	San Gabriel Valley Deep Plumes	State/Tribal Solid Waste	Click Here	None Found
SGV-Shallow-Plumes-CA	San Gabriel Valley Shallow Plumes	State/Tribal Solid Waste	Click Here	None Found
SGV-Shallow-Plumes-Puente-Valley-CA	Puente Valley Shallow Plumes	State/Tribal Solid Waste	Click Here	None Found
SLIC-Closed-CA	Geotracker - The Spills, Leaks, Investigation & Cleanup (SLIC), Closed Cases	Emergency Release Reports	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
SLIC-Open-CA	Geotracker -Spills, Leaks, Investigation & Cleanup (SLIC), Open Cases	Emergency Release Reports	Click Here	None Found
SML-CA	Site Mitigation List	State/Tribal ASTM Other	Click Here	None Found
Spills-SSO-CA	Sanitary Sewer System	ERS Supplemental Govt Sources	Click Here	None Found
SSTS-US	Section 7 Tracking System	ERS Supplemental Govt Sources	Click Here	None Found
State-Response-Active-CA	EnviroStor State Response Active Sites	State/Tribal NPL	Click Here	None Found
State-Response-NFA-CA	EnviroStor State Response NFA Sites	State/Tribal NPL	Click Here	None Found
State-Response-Other-CA	EnviroStor State Response Other Sites	State/Tribal NPL	Click Here	None Found
Superfund-Active-CA	Envirorstor Superfund Active Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)	State/Tribal CERCLIS Equivalent	Click Here	None Found
Superfund-NFA-CA	EnviroStor Superfund NFA Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)	State/Tribal CERCLIS Equivalent	Click Here	None Found
Superfund-Other-CA	EnviroStor Superfund Sites (aka BEAP, CalSites, Brownfields and Environmental Restoration Program)	State/Tribal CERCLIS Equivalent	Click Here	None Found
SWIS-CA	Solid Waste Information System	State/Tribal Landfill/Solid Waste	Click Here	None Found
SWLF-US	Solid Waste Facilities	Federal Solid Waste	Click Here	None Found
SWRCY-CA	Beverage Container Recycler Database	State/Tribal ASTM Other	Click Here	None Found
TierPer-CA	Tiered Permits	ERS Supplemental Govt Sources	Click Here	None Found
TOMS-CA	Topographically Occurring Mine Symbols	ERS Supplemental Govt Sources	Click Here	None Found
Tribal-Air-US	Tribal Air Permitted Facilities	ERS Supplemental Govt Sources	Click Here	None Found
Tribal-LUST-Closed-Reg9	Tribal Leaking Underground Storage Tanks, Region 9 (aka Indian Lust)	Federal LUST	Click Here	None Found
Tribal-LUST-Open-Reg9	Tribal Leaking Underground Storage Tanks , Region 9 (aka Indian Lust)	Federal LUST	Click Here	None Found
Tribal-ODI-US	Tribal Open Dump Sites	Federal Solid Waste	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
Tribal-UST-Reg9	Tribal Underground Storage Tanks (aka Tribal UST)	Federal UST	Click Here	None Found
Tribal-VCP-US	Tribal VCP	Federal Tribal VCP	Click Here	None Found
TRIS2000-US	Toxics Release Inventory System	ERS Supplemental Govt Sources	Click Here	None Found
TRIS2010-US	Toxics Release Inventory System	ERS Supplemental Govt Sources	Click Here	None Found
TRIS80-US	Toxics Release Inventory System	ERS Supplemental Govt Sources	Click Here	None Found
TRIS90-US	Toxics Release Inventory System	ERS Supplemental Govt Sources	Click Here	None Found
TSCA-US	Toxics Substance Control Sites	ERS Supplemental Govt Sources	Click Here	None Found
UIC2-CA	Injection Wells	ERS Supplemental Govt Sources	Click Here	None Found
UIC-CA	Underground Injection Control Wells	ERS Supplemental Govt Sources	Click Here	None Found
UMTRA-US	Uranium Mill Tailings Remedial Action Sites	ERS Supplemental Govt Sources	Click Here	None Found
USGS-Waterwells-US	Ground Water Site Inventory	ERS Supplemental Govt Sources	Click Here	None Found
UST-Abandoned-CA	Abandoned UST Initiative (aka Inventory of Abandoned Tank Sites)	State/Tribal UST	Click Here	None Found
UST-CA	Geotracker - Underground Storage Tanks	State/Tribal UST	Click Here	None Found
UST-Closed-CA	UST Case Closure Review Denials and Approved Orders (aka Closure of Underground Storage Tank (UST) Cases)	State/Tribal UST	Click Here	None Found
USTComp-CA	Previously Abandoned Tanks Now in Compliance (aka Compliance UST)	State/Tribal UST	Click Here	None Found
UST-CRSP-CA	Underground Storage Tanks	State/Tribal UST	Click Here	None Found
UST-Priority-CA	UST Cleanup Fund Priority List	State/Tribal UST	Click Here	None Found
UST-Proposed-CA	Proposed Closure of UST Cases (aka UST Proposed for Closure)	State/Tribal UST	Click Here	None Found
Vapor-Intrusions-US	Vapor Intrusion Database	ERS Supplemental Govt Sources	Click Here	None Found
VCP-Active-CA	EnviroStor VCP Active Sites	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
VCP-NFA-CA	EnviroStor Database VCP NFA Listing	State/Tribal Voluntary Cleanup Sites	Click Here	None Found

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ABBREVIATION	DATABASE FULLNAME	DATABASE CATEGORY	DATABASE DETAILS LINK	TOTAL LISTINGS
VCP-Other-CA	EnviroStor VCP Other Sites	State/Tribal Voluntary Cleanup Sites	Click Here	None Found
WDR-CA	Waste Discharge Requirements	ERS Supplemental Govt Sources	Click Here	None Found
Wells-CA	California Wells	ERS Supplemental Govt Sources	Click Here	None Found

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UN-MAPPABLE OCCURRENCES

The following occurrences were not mapped primarily due to incomplete or inaccurate address information. All of the following occurrences were determined to share the same zip code as the area searched. General status information is given with each occurrence along with any address information entered by the agency responsible for the list.

ID	Facility Name	Address	Database	Status
No "un-mapped" sites requested.				

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Appendix F

Preliminary Water Quality Management Plan

Preliminary

Water Quality Management Plan

For:

Sierra / Casa Grande Warehouse

APN(s): 0235-211-03-000, 0235-211-04-000 (Parcel-1)
0235-211-10-0-000 (Parcel-2)

WQMP No.

At the Intersection of Sierra Avenue & Casa Grande Drive

Prepared for:

DW Development

118 S. Beverely Drive Suite 215

Beverly Hills, Ca 90212

Prepared by:

Allard Engineering

16866 Seville Avenue

Fontana, CA 92335

Phone (909) 356-1815

rallard@allardeng.com

Preparation Date: 09/27/2019
Approval Date:_____

Project Owner's Certification

This Water Quality Management Plan (WQMP) has been prepared for CalAtlantic Homes Inc. by Allard Engineering. The WQMP is intended to comply with the requirements of the City of Fontana and the NPDES Area wide Stormwater Program requiring the preparation of a WQMP. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with San Bernardino County's Municipal Storm Water Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):	WQMP	Grading Permit Number(s):	
Tract/Parcel Map Number(s):	TR No.	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN (s): 0235-211-03-000, 0235-211-04-000 (Parcel-1) 0235-211-10-0-000 (Parcel-2)

Owner's Signature			
Owner Name: Dennis Rice			
Title	President		
Company	David Weiner - DW Development		
Address	118 S. Beverely Drive Suite 215 Beverly Hills, Ca 90212		
Email			
Telephone #			
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):	MCN WQMP	Grading Permit Number(s):	
Tract/Parcel Map Number(s):	TR No.	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			APN (s): 0235-211-03-000, 0235-211-04-000 (Parcel-1) 0235-211-10-0-000 (Parcel-2)

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of Regional Water Quality Control Board Order No. R8-2010-0036."

Engineer: RAYMOND ALLARD		PE Stamp Below
Title	PRESIDENT	
Company	Allard Engineering	
Address	16866 Seville Avenue	
Email	rallard@allardeng.com	
Telephone #	(909) 356-1815	
Signature		
Date		

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Section 1 Discretionary Permit(s)

Form 1-1 Project Information

Project Name	Sierra / Casa Grande Warehouse				
Project Owner Contact Name:	Dennis Rice				
Mailing Address:	2211 Michelson Drive, #650 Irvine, CA 92612	E-mail Address:		Telephone:	951-751-5700
Permit/Application Number(s):	MCN : WQMP :		Tract/Parcel Map Number(s):	APN (s): 0235-211-03-000, 0235-211-04-000 (Parcel-1) 0235-211-10-0-000 (Parcel-2)	
Additional Information/ Comments:	N/A,				
Description of Project:	The project is proposing 15.23 acres of commercial used warehouse development. The project consist of warehouse building, dock areas, trailer parking stalls, driveways, side walks, landscaping/planter area and associated offsite street improvements on Sierra Avenue & Casa Grade Drive. The project is located in the City of Fontana, bounded by Casa Grande Drive to the south, Sierra Avenue to the west, SCE right of way to the east, and un-developed vacant lots to the north. The project is also proposing frontage parkway improvements that include sidewalk, planters and curb & gutter being approximately 1,675-ft. The proposed site drainage area divided into two drainage management areas (DMA-1, DMA-2) based on the flow pattern onsite. DMA-1 include an Infltration Basin-1 for water quality volume, a network of storm drain pipe/conveyance system including grate inlet with ADS Flexstorm Filter Inserts and a trench drain with Oldcastle FloGard Filter Insert for pre-treatment. Basin-1 is proposed to be connected with Basin-2 via equalization drain. Once Basin-1 reach it capacity, it will drain to to basin-2 for water quality treatment. DMA-2 include an Infltration Basin-1 for water quality volume, a network of storm drain pipe/conveyance system including grate inlet with ADS Flexstorm Filter Inserts and a trench drain with Oldcastle FloGard Filter Insert for pre-treatment. For storms larger than the water quality, the water will overflow the Basin-2, once Basin-1,2 reach their capacity and will drain into the proposed storm drain system within the site and will finally discharge to the 66" RCP master strom drain in Sierra Avenue at the south-west corner of the site.. The proposed parkway frontage improvements are approximately 1,675-ft which is less than the minimum required length of ½ mile (2,640-ft) and are exempt from water quality treatment per the San Bernardino County Transportation Project Total Guidance Document (TGD).				

Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	One Drainage Area: DA1 with two Drainage Management Areas (DMA-1, DMQA-2) On site drainage area divided into two drainage management areas (DMA-1, DMA-2) based on the flow pattern onsite. DMA-1 include an Infltration Basin-1 for water quality volume, a network of storm drain pipe/conveyance system including grate inlet with ADS Flexstorm Filter Inserts and a trench drain with Oldcastle FloGard Filter Insert for pre-treatment. Basin-1 is proposed to be connected with Basin-2 via equalization drain. Once Basin-1 reach it capacity, it will drain to to basin-2 for water quality treatment. DMA-2 include an Infltration Basin-1 for water quality volume, a network of storm drain pipe/conveyance system including grate inlet with ADS Flexstorm Filter Inserts and a trench drain with Oldcastle FloGard Filter Insert for pre-treatment. For storms larger than the water quality, the water will overflow the Basin-2, once the Basin-1,2 reach their capacity and will drain into the proposed storm drain system within the site and will finally discharge to the 66" RCP master strom drain in Sierra Avenue at the south-west corner of the site.

Section 2 Project Description

2.1 Project Information

This section of the WQMP should provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein. The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

Form 2.1-1 Description of Proposed Project

[1] Development Category (Select all that apply):

☐ Significant re-development involving the addition or replacement of 5,000 ft² or more of impervious surface on an already developed site	☒ New development involving the creation of 10,000 ft² or more of impervious surface collectively over entire site	☐ Automotive repair shops with standard industrial classification (SIC) codes 5013, 5014, 5541, 7532- 7534, 7536-7539	☐ Restaurants (with SIC code 5812) where the land area of development is 5,000 ft² or more
☐ Hillside developments of 5,000 ft² or more which are located on areas with known erosive soil conditions or where the natural slope is 25 percent or more	☐ Developments of 2,500 ft² of impervious surface or more adjacent to (within 200 ft) or discharging directly into environmentally sensitive areas or waterbodies listed on the CWA Section 303(d) list of impaired waters.	☒ Parking lots of 5,000 ft² or more exposed to storm water	☐ Retail gasoline outlets that are either 5,000 ft² or more, or have a projected average daily traffic of 100 or more vehicles per day

☐ Non-Priority / Non-Category Project *May require source control LID BMPs and other LIP requirements. Please consult with local jurisdiction on specific requirements*.

[2] Project Area (ft2):	663,419 sf	[3] Number of Dwelling Units:	n/a	[4] SIC Code:	4225

[5] Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

6 Does Project include roads? Yes ☒ No ☐ *If yes, ensure that applicable requirements for transportation projects are addressed (see Appendix A of TGD for WQMP)*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term of WQMP stormwater facilities:

Ridge Development Company, L.L.C. will be responsible to build the site and the maintenance of the post-developed BMPs.

Address:

2211 Michelson Drive, #650

Irvine, CA 92612

Phone Number:

951-751-5700

2.3 Potential Stormwater Pollutants

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-3 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern			
Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☐	N ☒	
Phosphorous	E ☒	N ☐	
Nitrogen	E ☒	N ☐	
Sediment	E ☒	N ☐	
Metals	E ☒	N ☐	
Oil and Grease	E ☒	N ☐	
Trash/Debris	E ☒	N ☐	
Pesticides / Herbicides	E ☒	N ☐	
Organic Compounds	E ☒	N ☐	
Other: Nutrients	E ☒	N ☐	
Other: Oxygen Demanding Compounds	E ☒	N ☐	
Other:	E ☐	N ☐	

2.4 Water Quality Credits

A water quality credit program is applicable for certain types of development projects if it is not feasible to meet the requirements for on-site LID. Proponents for eligible projects, as described below, can apply for water quality credits that would reduce project obligations for selecting and sizing other treatment BMP or participating in other alternative compliance programs. Refer to Section 6.2 in the TGD for WQMP to determine if water quality credits are applicable for the project.

Form 2.4-1 Water Quality Credits

[1] Project Types that Qualify for Water Quality Credits: *Select all that apply*

☐ Redevelopment projects that reduce the overall impervious footprint of the project site. [Credit = % impervious reduced]	Higher density development projects ☐ Vertical density [20%] ☐ 7 units/ acre [5%]	☐ Mixed use development, (combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that demonstrate environmental benefits not realized through single use projects) [20%]	☐ Brownfield redevelopment (redevelop real property complicated by presence or potential of hazardous contaminants) [25%]
☐ Redevelopment projects in established historic district, historic preservation area, or similar significant core city center areas [10%]	☐ Transit-oriented developments (mixed use residential or commercial area designed to maximize access to public transportation) [20%]	☐ In-fill projects (conversion of empty lots & other underused spaces < 5 acres, substantially surrounded by urban land uses, into more beneficially used spaces, such as residential or commercial areas) [10%]	☐ Live-Work developments (variety of developments designed to support residential and vocational needs) [20%]

[2] Total Credit % 0 *(Total all credit percentages up to a maximum allowable credit of 50 percent)*

Description of Water Quality Credit Eligibility (if applicable)	N/A

Section 3 Site and Watershed Description

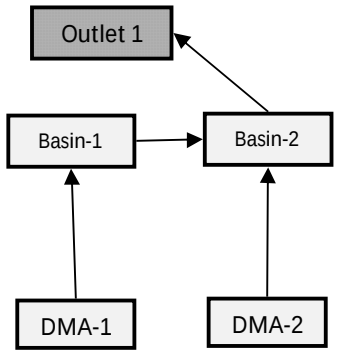
Describe the project site conditions that will facilitate the selection of BMP through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed DMAs) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. *If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet.*

Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34.15901° N	Longitude 117.43418° W	Thomas Bros Map page PAGE ___ GRID _ _

[1] San Bernardino County climatic region: ☒ Valley ☐ Mountain

[2] Does the site have more than one drainage area (DA): Yes☐ No☒ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*



Conveyance	
DA-1 TO Outlet 1	One Drainage Area: DA1 with two Drainage Management Areas (DMA-1, DMQA-2) On site drainage area divided into two drainage management areas (DMA-1, DMA-2) based on the flow pattern onsite. DMA-1 include an Infltration Basin-1 for water quality volume, a network of storm drain pipe/conveyance system including grate inlet with ADS Flexstorm Filter Inserts and a trench drain with Oldcastle FloGard Filter Insert for pre-treatment. Basin-1 is proposed to be connected with Basin-2 via equalization drain. Once Basin-1 reach it capacity, it will drain to to basin-2 for water quality

	treatment. DMA-2 include an Infltration Basin-1 for water quality volume, a network of storm drain pipe/conveyance system including grate inlet with ADS Flexstorm Filter Inserts and a trench drain with Oldcastle FloGard Filter Insert for pre-treatment. For storms larger than the water quality, the water will overflow the Basin-2, once the Basin-1,2 reach their capacity and will drain into the proposed storm drain system within the site and will finally discharge to the 66" RCP master strom drain in Sierra Avenue at the south-west corner of the site.

Form 3-2 Existing Hydrologic Characteristics for Drainage Areas (DA-1)				
For Drainage Areas 1-3 sub-watershed DMA, provide the following characteristics	DMA-1+DMA-2			
1 DMA drainage area (ft^2)	663,419 sf			
2 Existing site impervious area (ft^2)	0 sf			
3 Antecedent moisture condition *For desert areas, use* *http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	III			
4 Hydrologic soil group *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	A			
5 Longest flowpath length (ft)	1,175			
6 Longest flowpath slope (ft/ft)	1.9%			
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Undeveloped-Open Brush			
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50% Attach photos of site to support rating*	50%			

Form 3-3 Watershed Description for Drainage Area(s) DA1	
Receiving waters *Refer to Watershed Mapping Tool -* *http://sbcounty.permitrack.com/WAP* *See 'Drainage Facilities" link at this website*	Site Drains to 66" Master SD (RCB) in Sierra Avenue San Sevaine Basins San Sevaine Channel Etiwanda Creek Channel Santa Ana River Reach 3 Predo Dam
Applicable TMDLs *Refer to Local Implementation Plan*	Santa Ana River Reach 3: Pathogens "Bacterial Indicator TMLDs for Middle Santa Ana River Watershed Waterbodies (Bill Rice) Nitrate : Santa Ana River Reach 3 Nitrate TMDL (Hope Smythe) Prado Flood Control basin Pathogens "Bacterial Indicator TMLDs for Middle Santa Ana River Watershed Waterbodies (Bill Rice) Santa Ana River Reach 2 NONE Santa Ana River Reach 1 NONE Tidal Prism, Santa Ana River NONE
303(d) listed impairments *Refer to Local Implementation Plan and Watershed Mapping Tool –* *http://sbcounty.permitrack.com/WAP and State Water Resources Control Board website – http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/index.shtml*	Expected pollutants of concern include heavy metals, organic compounds, trash/debris and oil/grease. Potential pollutants of concern include bacteria vitus, nutrients, pesticides, sediments, and oxygen demanding substances. There is no evidence to suggest that any other pollutants will be produced from the project site other than these 303(d) listed impairment Santa Ana River Reach 3: Pathogens, Metals (copper & lead) Prado Flood Control Basin: Pathogens and Nutrients Santa Ana River Reach 2: Pathogens Santa Ana River Reach 1 and Tidal prism Santa Ana River : NONE
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	San Bernardino Kangaroo Rat, Riversidian Alluvial Sage Scru
Unlined Downstream Water Bodies *Refer to Watershed Mapping Tool –* *http://sbcounty.permitrack.com/WAP*	Santa Ana River



WQMP Project Report

County of San Bernardino Stormwater Program

Santa Ana River Watershed Geodatabase

Friday, June 21, 2019

Note: The information provided in this report and on the Stormwater Geodatabase for the County of San Bernardino Stormwater Program is intended to provide basic guidance in the preparation of the applicant's Water Quality Management Plan (WQMP) and should not be relied upon without independent verification.

Project Site Parcel Number(s):	023916141, 023916138, 023916129, 023916144, 023916147
Project Site Acreage:	32.153
HCOC Exempt Area:	Yes. Verify that the project is completely with the HCOC exemption area.
Closest Receiving Waters: (Applicant to verify based on local drainage facilities and topography.)	**System Number** - 205 **Facility Name** - Riverside Groin #4, COE **Owner** - SBCFCD
Closest channel segment's susceptibility to Hydromodification:	EHM
Highest downstream hydromodification susceptibility:	High
Is this drainage segment subject to TMDLs?	No
Are there downstream drainage segments subject to TMDLs?	No
Is this drainage segment a 303d listed stream?	No
Are there 303d listed streams downstream?	Yes
Are there unlined downstream waterbodies?	No
Project Site Onsite Soil Group(s):	A
Environmentally Sensitive Areas within 200':	SAN BERNARDINO KANGAROO RAT,Riversidian Alluvial Sage Scru
Groundwater Depth (FT):	-204
Parcels with potential septic tanks within 1000':	No
Known Groundwater Contamination Plumes within 1000':	No
Studies and Reports Related to Project Site:	Cactus Basin Summary Report Master Storm Drainage Plan Study Summary Report Master Storm Drainage Plan Map CSDP 3-3 Rialto Channel Drainage Area Volume I CSDP 3-3 Rialto Channel Drainage Area Volume II CSDP 3-3 Rialto Channel Drainage Area Volume III Revised CSDP 3-3 Rialto Channel Drainage Area CSDP 3-3 Rialto Channel Drainage Area Volume I CSDP 3-3 Rialto Channel Drainage Area Volume IV CSDP 3-3 Rialto Channel Drainage Area Volume V CSDP 3 CALC SHEET FOR HYDRO CSDP 3-3 Rialto Channel Drain Area Draft FONTANA MPD FEE STUDY Master SD Hydrology Calcs for Fontana Vol III Master SD Hydrology Calcs For Fontana Vol II Master SD Hydrology Calcs for Fontana Vol V Master SD Hydrology Calcs for Fontana Vol IV Preliminary Report on Proposed North SBFCP Rialto Channel SD Plan Rialto MPD Vol1 Rialto MPD Vol II RS-Rialto Map Book-FINAL Layout2 San Sevaine - Boyle Map 0001 San Sevaine - Boyle Map 0002 San Sevaine - Boyle Map 0003 West Fontana Channel Preliminary Basin Study SBVMWD High Groundwater / Pressure Zone Area

Hydrologic Conditions of Concern	☐ Yes *Complete Hydrologic Conditions of Concern (HCOC) Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-10 in submittal* ☒ No
Watershed–based BMP included in a RWQCB approved WAP	☐ Yes *Attach verification of regional BMP evaluation criteria in WAP* • *More Effective than On-site LID* • *Remaining Capacity for Project DCV* • *Upstream of any Water of the US* • *Operational at Project Completion* • *Long-Term Maintenance Plan* ☒ No

Section 4 Best Management Practices (BMP)

4.1 Source Control BMP

4.1.1 Pollution Prevention

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	Practical education materials will be provided to property owner and Summit at Rosena Maintenance staffs covering various water quality issues that will need to be addressed on their specific site. These materials will include general practices that contribute to the protection of storm water quality and BMP's that eliminate or reduce pollution during property improvements. The developer will request these materials in writing at least 30 days prior to intended distribution and will then be responsible for publication and distribution.
N2	Activity Restrictions	☒	☐	Restrictions may be developed by property owner or other mechanisms. Pesticide applications will be performed by an applicator certified by the California Department of Pesticide Regulation. Vehicle washing will be prohibited.
N3	Landscape Management BMPs	☒	☐	According to the California Stormwater Quality Associations Stormwater Best Management Practice Handbook, landscape planning is implemented to reduce groundwater and storm water contamination. This will be accomplished through an infiltration basins, and landscape areas.
N4	BMP Maintenance	☒	☐	See section 5, Table 5.1 for details on BMP maintenance
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	Not applicable
N6	Local Water Quality Ordinances	☐	☒	Not applicable
N7	Spill Contingency Plan	☒	☐	The spill contingency plan shall be provided in accordance with Section 6.95 of the California Health and Safety Code.
N8	Underground Storage Tank Compliance	☐	☒	No underground storage tank on the site.

Form 4.1-1 Non-Structural Source Control BMPs				
N9	Hazardous Materials Disclosure Compliance	☐	☒	No hazardous materials in the site.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☐	☒	No hazardous materials in the site.
N11	Litter/Debris Control Program	☒	☐	Will be responsible by landscaper contractor assigned by Community Facilities Districts (CFD). Litter/debris control a minimum of once every two weeks.
N12	Employee Training	☒	☐	All employees will be trained administered by Community Facilities Districts (CFD) once in a year.
N13	Housekeeping of Loading Docks	☐	☒	Housekeeping of Loading Docks will be maintained by the owner.
N14	Catch Basin Inspection Program	☒	☐	Catch basins will be inspected a minimum of once every three months during the dry season and a minimum of once every two months during the rainy season.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	Parking lot and onsite pavement will be maintained by the owner.
N16	Other Non-structural Measures for Public Agency Projects	☐	☒	Not applicable
N17	Comply with all other applicable NPDES permits	☒	☐	Yes, if necessary.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	Signs will be placed above storm drain inlets to warn the public of prohibitions against waste disposal
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	No material storages areas in the project
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Trash enclosures, containment structures will be provided and will be maintained by Community Facilities District (CFD) or CFD assigned operator.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	Rain sensors will be incorporated into the onsite sprinkler system so that no unnecessary watering of landscaped areas occurs after storm events.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	New landscaped areas will be constructed at a minimum of 1 inch below existing paved areas
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☐	☒	No Slopes and Channel, Not applicable
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	Not Applicable
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	No Maintenance Bays, Not applicable
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	No carwash areas , Not applicable
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	No outdoor Processing, Not applicable

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	No equipment wash areas, Not applicable
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	No Fueling Areas, Not applicable
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☐	☒	No Hillside Landscaping, Not applicable
S14	Wash water control for food preparation areas	☐	☒	No food Preparation, Not applicable
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	No Community Car Wash, Not applicable

4.1.2 Preventative LID Site Design Practices

Site design practices associated with new LID requirements in the MS4 Permit should be considered in the earliest phases of a project. Preventative site design practices can result in smaller DCV for LID BMP and hydromodification control BMP by reducing runoff generation. Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Preventative LID Site Design Practices Checklist
Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☒ No ☐ Explanation: We will build multiple planter areas in addition to an infiltration basin.
Maximize natural infiltration capacity: Yes ☒ No ☐ Explanation: Part of Runoff from impervious surfaces will be conveyed through landscaped areas so that infiltration is maximized. Runoff will also be intercepted by an contech infiltration chamber system
Preserve existing drainage patterns and time of concentration: Yes ☒ No ☐ Explanation: The site currently drains South. Post developed flow will also drain south this is consistent with existing and Master Planned flow patterns.
Disconnect impervious areas: Yes ☒ No ☐ Explanation: Part of impervious/roof areas will drain into landscaped areas.
Protect existing vegetation and sensitive areas: Yes ☐ No ☒ Explanation: There are no environmentally sensitive portions onsite and existing vegetation will be kept as much as possible.
Re-vegetate disturbed areas: Yes ☒ No ☐ Explanation: Part of disturbed areas will be revegeated, see landscape plan.
Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐ Explanation: No compaction will be performed within the area where the infiltration chamber systems are proposed.
Utilize vegetated drainage swales in place of underground piping or imperviously lined swales: Yes ☐ No ☒ Explanation: Runoff will also be intercepted by the infiltration chamber system and multiple landscaped areas.
Stake off areas that will be used for landscaping to minimize compaction during construction : Yes ☒ No ☐ Explanation: No compaction will be performed within the area where landscape areas are proposed.

4.2 Project Performance Criteria

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in the MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection of any downstream waterbody segments with a HCOC. *If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.*

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), the San Bernardino County Stormwater Program requires use of the P_6 method (MS4 Permit Section XI.D.6a.ii) – Form 4.2-1
- For HCOC pre- and post-development hydrologic calculation, the San Bernardino County Stormwater Program requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for HCOC performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DMA-1) See attached summary table and calculation sheets for DCV

1 Project area DMA-1 (ft^2): 502,247	2 Imperviousness after applying preventative site design practices (Imp%): 89.5% .	3 Runoff Coefficient (Rc): 0.72 *$R_c = 0.76\ (Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$* Varies for each DMAs. See provided Calculation Sheets in the following pages.
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): - http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html 0.762 inches.		
5 Compute P_6, Mean 6-hr Precipitation (inches): 1.285 for all DMAs. See provided Calculation Sheets in the following pages. *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 67,040 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DMA-) See attached summary table and calculation sheets for DCV

1 Project area DMA-2 (ft^2): 161,172	2 Imperviousness after applying preventative site design practices (Imp%): 76.5% .	3 Runoff Coefficient (Rc): 0.56 *$R_c = 0.76 (Imp\%)^3-0.78(Imp\%)^2+0.774(Imp\%)+0.04$* Varies for each DMAs. See provided Calculation Sheets in the following pages.
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr-1hr}$ (in): - *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html* 0.762 inches.		
5 Compute P_6, Mean 6-hr Precipitation (inches): 1.285 for all DMAs. See provided Calculation Sheets in the following pages. *P_6 = Item 4 *C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Valley = 1.4807; Mountain = 1.909; Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 16,655 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

DCV from Entire Site (DA-1): 83,695 cu-ft

Refer to the attached design capture volume calculations for drainage management area DMA-1 & DMA-2 below:

Target Captured Volume
Watershed DMA 1

1) Calculate the "Watershed Imperviousness Ratio", I which is equal to the percent of impervious area in the BMP Drainage Area divided by 100

Imperviousness(i)= **0.895**

Total Acreage(A) = **11.53** 502247 sf

2) Calculate the composite Runoff Coefficient C_{bmp} for the drainage area

$C_{bmp} = 0.858i^3-0.78i^2+0.774i+0.04$

C_{bmp} = 0.72

3) Determine which Regression Coefficient to use by region the project is located in

Valley	1.481
Mountain	1.909
Desert	1.237

Regression coefficient for this project is: 1.481

4) Determine the area averaged "6 hour Mean Storm Rainfall" , P_6

2 yr 1 Hr Rainfall Depth per NOAA Atlas 14= **0.762** inches

P_6 = 2 yr 1 hr Rainfall x Regression coefficient

P_6 = 1.1285 inches

5) Determine Regression Constant (a) for 48 hour drawdown

a for 24 hour = 1.582
a for 48 hour = 1.963

a = 1.963

6) Calculate the Maximized Detention Volume, P_0

$P_0 = C \times a \times P6$

Po(inches) = 1.6018

7) Calculate the Target Capture Volume, V_0, in acre feet

$V_0 = (P_0 * A)/12$

V_0 = 1.54 acre-feet
V_0 = 67,040 CF

DMA-1 Imperviousness Calculation
Watershed DMA 1

DMA-1 area	502,247 sf
Pervious Area (Landscape/Planters, Inf. Basin)	52,770 sf
Impervious Area (Roof, Driveway, Parking Lot)	449,477 sf
Percent Imperviousness:	89.493217 ~ 89.5%

Target Captured Volume
Watershed DMA 2

1) Calculate the "Watershed Imperviousness Ratio", I which is equal to the percent of impervious area in the BMP Drainage Area divided by 100

Imperviousness(i)= **0.765**

Total Acreage(A) = **3.70** 161172 sf

2) Calculate the composite Runoff Coefficient C_{bmp} for the drainage area

$C_{bmp} = 0.858i^3-0.78i^2+0.774i+0.04$

C_{bmp} = 0.56

3) Determine which Regression Coefficient to use by region the project is located in

Valley	1.481
Mountain	1.909
Desert	1.237

Regression coefficient for this project is: 1.481

4) Determine the area averaged "6 hour Mean Storm Rainfall" , P_6

2 yr 1 Hr Rainfall Depth per NOAA Atlas 14= **0.762** inches

P_6 = 2 yr 1 hr Rainfall x Regression coefficient

P_6 = 1.1285 inches

5) Determine Regression Constant (a) for 48 hour drawdown

a for 24 hour = 1.582
a for 48 hour = 1.963

a = 1.963

6) Calculate the Maximized Detention Volume, P_0

P_0 = C x a x P6

Po(inches) = 1.2400

7) Calculate the Target Capture Volume, V_0, in acre feet

$V_0 = (P_0 * A)/12$

V_0 = 0.38 acre-feet
V_0 = 16,655 CF

Infiltration Basin-2 Capacity Calculation:

Surface Area	9348	SF	Avg Area of inf. Surface
Rock Depth	0	FT	at mid water surface
Surface Depth	2	FT	
Infiltration	*0.8125*	*FT*	Inf. In 3 hr during basin filling [3* (3.25/12)]
Volume Provided	26291	CF	
Volume Needed	*20,923*	*CF*	
Difference	5,368	CF	

Treated volume is 106.7% of the volume needed.

SITE IMPERVIOUSNESS CALCULATION EXHIBIT

PLANTER

PLANTER

PAVED DRIVEWAY & PARKING LOT

LANDSCAPE

BULDG. ROOF

BULDG. ROOF

LANDSCAPE

DMA-2
(3.7 AC)

PROPOSED WAREHOUSE
317,820 SF
FF=1751.50
PAD=1751.0

DMA-1
(11.53 AC)

DMA-2: 161,171-SF
PERV. AREA: 37,783-SF
IMPV AREA: 123,389-SF
76.5% IMPRV.

FF=1751.00
PAD=1750.5

DMA-1: 502,247-SF
PERV. AREA: 52,770-SF
IMPV AREA: 449,477-SF
89.5% IMPRV.

PAVED DRIVEWAY & PARKING LOT

LANDSCAPE

PAVED DRIVEWAY & PARKING LOT

PAVED DRIVEWAY & PARKING LOT

LANDSCAPE

LANDSCAPE

INF. BASIN

INF. BASIN

SIERRA AVENUE

CASA GRANDE AVE

NOAA Atlas 14, Volume 6, Version 2
Location name: Fontana, California, USA*
Latitude: 34.159°, Longitude: -117.4342°
Elevation: 1755.07 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.142** (0.118-0.172)	**0.187** (0.155-0.227)	**0.245** (0.203-0.299)	**0.292** (0.240-0.359)	**0.355** (0.282-0.452)	**0.403** (0.313-0.524)	**0.451** (0.342-0.601)	**0.500** (0.368-0.686)	**0.566** (0.399-0.810)	**0.617** (0.420-0.915)
10-min	**0.203** (0.169-0.246)	**0.268** (0.223-0.326)	**0.352** (0.291-0.429)	**0.419** (0.344-0.515)	**0.509** (0.404-0.648)	**0.578** (0.449-0.751)	**0.647** (0.490-0.862)	**0.717** (0.528-0.984)	**0.811** (0.572-1.16)	**0.884** (0.602-1.31)
15-min	**0.245** (0.204-0.298)	**0.324** (0.269-0.394)	**0.425** (0.352-0.518)	**0.507** (0.416-0.623)	**0.616** (0.489-0.783)	**0.699** (0.543-0.908)	**0.782** (0.592-1.04)	**0.867** (0.638-1.19)	**0.981** (0.692-1.41)	**1.07** (0.728-1.59)
30-min	**0.375** (0.312-0.455)	**0.495** (0.411-0.601)	**0.650** (0.538-0.792)	**0.774** (0.636-0.951)	**0.940** (0.747-1.20)	**1.07** (0.829-1.39)	**1.19** (0.905-1.59)	**1.32** (0.975-1.82)	**1.50** (1.06-2.15)	**1.63** (1.11-2.42)
60-min	**0.577** (0.480-0.700)	**0.762** (0.633-0.926)	**1.00** (0.829-1.22)	**1.19** (0.979-1.47)	**1.45** (1.15-1.84)	**1.64** (1.28-2.14)	**1.84** (1.39-2.45)	**2.04** (1.50-2.80)	**2.31** (1.63-3.30)	**2.51** (1.71-3.73)
2-hr	**0.879** (0.731-1.07)	**1.15** (0.956-1.40)	**1.50** (1.24-1.83)	**1.78** (1.46-2.18)	**2.15** (1.70-2.73)	**2.43** (1.89-3.16)	**2.71** (2.05-3.61)	**2.99** (2.20-4.11)	**3.37** (2.38-4.83)	**3.66** (2.49-5.43)
3-hr	**1.13** (0.942-1.38)	**1.48** (1.23-1.80)	**1.92** (1.59-2.34)	**2.27** (1.86-2.79)	**2.74** (2.17-3.48)	**3.09** (2.40-4.01)	**3.44** (2.61-4.58)	**3.79** (2.79-5.21)	**4.27** (3.01-6.11)	**4.63** (3.15-6.86)
6-hr	**1.69** (1.41-2.06)	**2.21** (1.83-2.68)	**2.86** (2.37-3.48)	**3.37** (2.77-4.14)	**4.05** (3.22-5.16)	**4.56** (3.55-5.93)	**5.07** (3.84-6.76)	**5.58** (4.11-7.66)	**6.26** (4.41-8.96)	**6.77** (4.61-10.0)
12-hr	**2.34** (1.95-2.84)	**3.06** (2.54-3.72)	**3.97** (3.29-4.83)	**4.68** (3.85-5.75)	**5.62** (4.46-7.15)	**6.31** (4.90-8.20)	**7.00** (5.30-9.33)	**7.68** (5.65-10.5)	**8.58** (6.05-12.3)	**9.25** (6.30-13.7)
24-hr	**3.17** (2.81-3.65)	**4.18** (3.70-4.83)	**5.46** (4.82-6.32)	**6.46** (5.66-7.54)	**7.77** (6.58-9.36)	**8.74** (7.25-10.7)	**9.69** (7.85-12.2)	**10.6** (8.38-13.8)	**11.9** (8.98-16.0)	**12.8** (9.35-17.8)
2-day	**3.88** (3.44-4.47)	**5.22** (4.62-6.03)	**6.95** (6.13-8.04)	**8.34** (7.30-9.72)	**10.2** (8.63-12.3)	**11.6** (9.62-14.3)	**13.0** (10.5-16.4)	**14.4** (11.4-18.7)	**16.4** (12.4-22.1)	**17.8** (13.0-24.9)
3-day	**4.16** (3.68-4.79)	**5.70** (5.04-6.57)	**7.74** (6.83-8.95)	**9.43** (8.25-11.0)	**11.7** (9.95-14.2)	**13.6** (11.3-16.7)	**15.4** (12.5-19.4)	**17.4** (13.7-22.5)	**20.1** (15.2-27.1)	**22.2** (16.2-31.0)
4-day	**4.44** (3.93-5.12)	**6.15** (5.44-7.09)	**8.45** (7.45-9.77)	**10.4** (9.08-12.1)	**13.1** (11.1-15.7)	**15.2** (12.6-18.7)	**17.4** (14.1-22.0)	**19.8** (15.6-25.6)	**23.1** (17.5-31.2)	**25.8** (18.8-35.9)
7-day	**5.11** (4.53-5.89)	**7.14** (6.31-8.23)	**9.88** (8.72-11.4)	**12.2** (10.7-14.2)	**15.4** (13.1-18.6)	**18.0** (14.9-22.2)	**20.7** (16.8-26.1)	**23.6** (18.6-30.6)	**27.6** (20.9-37.3)	**30.9** (22.6-43.1)
10-day	**5.52** (4.89-6.36)	**7.74** (6.85-8.93)	**10.8** (9.50-12.5)	**13.3** (11.7-15.5)	**16.9** (14.3-20.4)	**19.8** (16.4-24.4)	**22.8** (18.5-28.8)	**26.1** (20.5-33.8)	**30.6** (23.2-41.3)	**34.3** (25.1-47.9)
20-day	**6.58** (5.82-7.58)	**9.31** (8.24-10.7)	**13.1** (11.5-15.1)	**16.3** (14.3-19.0)	**20.9** (17.7-25.2)	**24.6** (20.4-30.2)	**28.5** (23.1-35.9)	**32.7** (25.8-42.4)	**38.8** (29.3-52.3)	**43.7** (31.9-60.9)
30-day	**7.65** (6.78-8.82)	**10.9** (9.61-12.5)	**15.3** (13.5-17.7)	**19.1** (16.8-22.3)	**24.7** (20.9-29.7)	**29.1** (24.2-35.8)	**33.9** (27.5-42.7)	**39.1** (30.8-50.6)	**46.5** (35.2-62.8)	**52.6** (38.5-73.4)
45-day	**9.13** (8.09-10.5)	**12.9** (11.4-14.9)	**18.2** (16.1-21.1)	**22.8** (20.0-26.6)	**29.5** (25.0-35.5)	**34.9** (29.0-42.9)	**40.8** (33.0-51.4)	**47.1** (37.1-61.0)	**56.3** (42.6-76.0)	**63.9** (46.8-89.2)
60-day	**10.6** (9.37-12.2)	**14.9** (13.2-17.2)	**20.9** (18.5-24.2)	**26.2** (22.9-30.5)	**33.8** (28.6-40.7)	**40.1** (33.3-49.3)	**46.9** (38.0-59.0)	**54.3** (42.8-70.3)	**65.0** (49.1-87.6)	**73.9** (54.0-103)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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Form 4.2-2 Summary of HCOC Assessment

Does project have the potential to cause or contribute to an HCOC in a downstream channel: Yes ☐ No ☒

Go to: http://sbcounty.permitrack.com/WAP

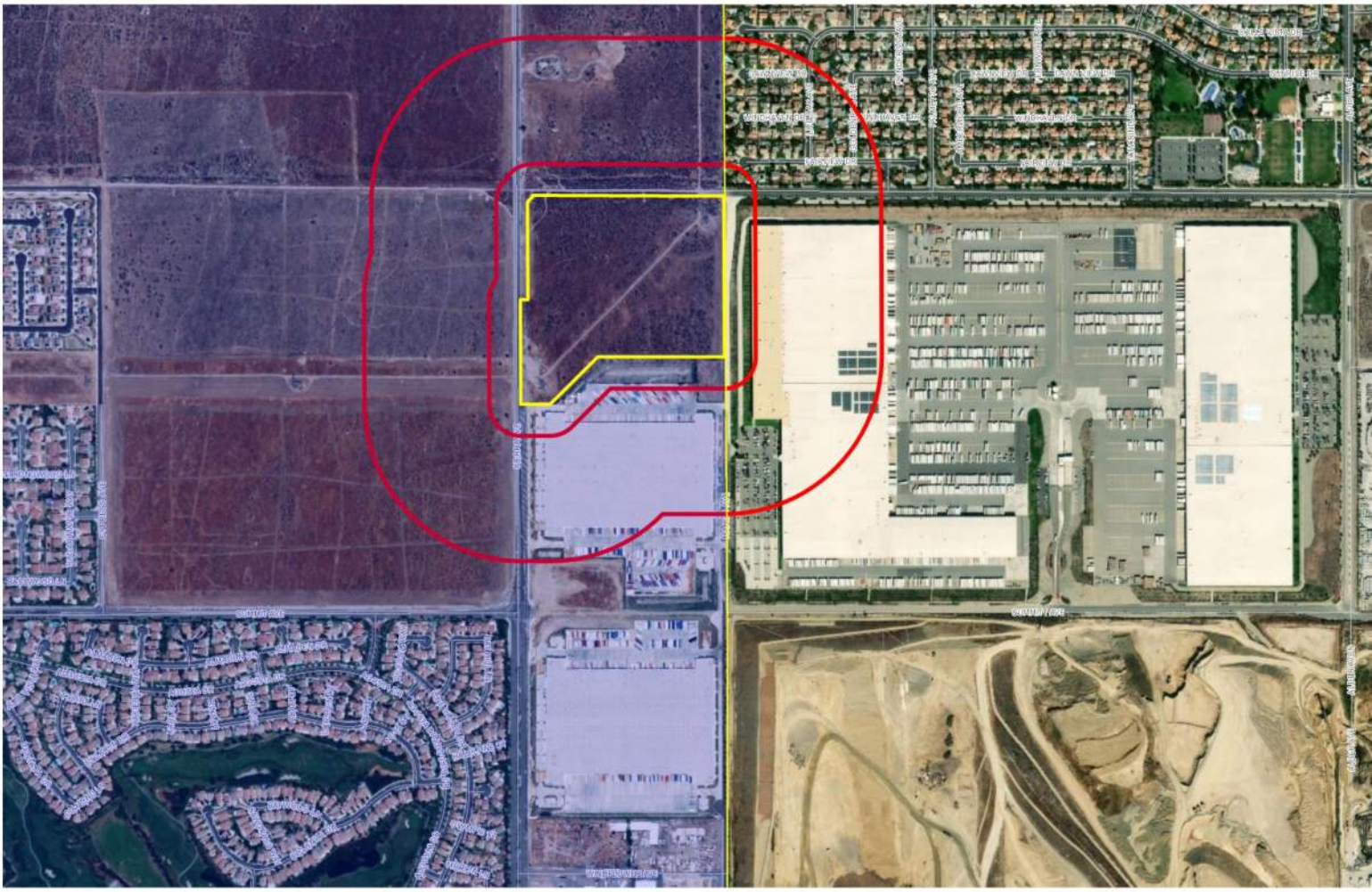
If "Yes", then complete HCOC assessment of site hydrology for 2yr storm event using Forms 4.2-3 through 4.2-5 and insert results below

(Forms 4.2-3 through 4.2-5 may be replaced by computer software analysis based on the San Bernardino County Hydrology Manual)

If "No," then proceed to Section 4.3 Project Conformance Analysis

Condition	Runoff Volume (ft^3)	Time of Concentration (min)	Peak Runoff (cfs)
Pre-developed	1 *Form 4.2-3 Item 12*	2 *Form 4.2-4 Item 13*	3 *Form 4.2-5 Item 10*
Post-developed	4 *Form 4.2-3 Item 13*	5 *Form 4.2-4 Item 14*	6 *Form 4.2-5 Item 14*
Difference	7 *Item 4 – Item 1*	8 *Item 5 – Item 2*	9 *Item 6 – Item 3*
Difference (as % of pre-developed)	10 % *Item 7 / Item 1*	11 % *Item 8 / Item 2*	12 % *Item 9 / Item 3*

Project site located within HCOC Exempt Area per San Bernardino County WAP. Also the project in developed condition will discharge to the Master Storm Drain System for up to 100-yr storm event.



0.2 Miles

RBF CONSULTING GIS

Site Address: permitrack.sbcounty.gov/wap



WQMP Project Report

County of San Bernardino Stormwater Program

Santa Ana River Watershed Geodatabase

Friday, June 21, 2019

Note: The information provided in this report and on the Stormwater Geodatabase for the County of San Bernardino Stormwater Program is intended to provide basic guidance in the preparation of the applicant's Water Quality Management Plan (WQMP) and should not be relied upon without independent verification.

Project Site Parcel Number(s):	023916141, 023916138, 023916129, 023916144, 023916147
Project Site Acreage:	32.153
HCOC Exempt Area:	Yes. Verify that the project is completely with the HCOC exemption area.
Closest Receiving Waters: (Applicant to verify based on local drainage facilities and topography.)	**System Number** - 205 **Facility Name** - Riverside Groin #4, COE **Owner** - SBCFCD
Closest channel segment's susceptibility to Hydromodification:	EHM
Highest downstream hydromodification susceptibility:	High
Is this drainage segment subject to TMDLs?	No
Are there downstream drainage segments subject to TMDLs?	No
Is this drainage segment a 303d listed stream?	No
Are there 303d listed streams downstream?	Yes
Are there unlined downstream waterbodies?	No
Project Site Onsite Soil Group(s):	A
Environmentally Sensitive Areas within 200':	SAN BERNARDINO KANGAROO RAT,Riversidian Alluvial Sage Scru
Groundwater Depth (FT):	-204
Parcels with potential septic tanks within 1000':	No
Known Groundwater Contamination Plumes within 1000':	No
Studies and Reports Related to Project Site:	Cactus Basin Summary Report Master Storm Drainage Plan Study Summary Report Master Storm Drainage Plan Map CSDP 3-3 Rialto Channel Drainage Area Volume I CSDP 3-3 Rialto Channel Drainage Area Volume II CSDP 3-3 Rialto Channel Drainage Area Volume III Revised CSDP 3-3 Rialto Channel Drainage Area CSDP 3-3 Rialto Channel Drainage Area Volume I CSDP 3-3 Rialto Channel Drainage Area Volume IV CSDP 3-3 Rialto Channel Drainage Area Volume V CSDP 3 CALC SHEET FOR HYDRO CSDP 3-3 Rialto Channel Drain Area Draft FONTANA MPD FEE STUDY Master SD Hydrology Calcs for Fontana Vol III Master SD Hydrology Calcs For Fontana Vol II Master SD Hydrology Calcs for Fontana Vol V Master SD Hydrology Calcs for Fontana Vol IV Preliminary Report on Proposed North SBFCP Rialto Channel SD Plan Rialto MPD Vol1 Rialto MPD Vol II RS-Rialto Map Book-FINAL Layout2 San Sevaine - Boyle Map 0001 San Sevaine - Boyle Map 0002 San Sevaine - Boyle Map 0003 West Fontana Channel Preliminary Basin Study SBVMWD High Groundwater / Pressure Zone Area

Form 4.2-3 HCOC Assessment for Runoff Volume

Weighted Curve Number Determination for: Pre-developed DA								
1a Land Cover type								
2a Hydrologic Soil Group (HSG)								
3a DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4a Curve Number (CN) *use Items 1 and 2 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								
Weighted Curve Number Determination for: Post-developed DA			DMA C	DMA D	DMA E	DMA F	DMA G	DMA H
1b Land Cover type								
2b Hydrologic Soil Group (HSG)								
3b DMA Area, ft^2 *sum of areas of DMA should equal area of DA*								
4b Curve Number (CN) *use Items 5 and 6 to select the appropriate CN from Appendix C-2 of the TGD for WQMP*								

5 Pre-Developed area-weighted CN:	7 Pre-developed soil storage capacity, S (in *S = (1000 / Item 5) – 10*	9 Initial abstraction, I_a (in): *I_a = 0.2 * Item 7*
6 Post-Developed area-weighted CN:	8 Post-developed soil storage capacity, S (in) *S = (1000 / Item 6) – 10*	10 Initial abstraction, I_a (in): *I_a = 0.2 * Item 8*

11 Precipitation for 2 yr, 24 hr storm (in):
Go to: http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html

12 Pre-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 9)^2 / ((Item 11 – Item 9 + Item 7)*

13 Post-developed Volume (ft^3):
*V_{pre} =(1 / 12) * (Item sum of Item 3) * [(Item 11 – Item 10)^2 / ((Item 11 – Item 10 + Item 8)*

14 Volume Reduction needed to meet HCOC Requirement, (ft^3):
*V_{HCOC} = (Item 13 * 0.95) – Item 12*

Form 4.2-4 HCOC Assessment for Time of Concentration

Compute time of concentration for pre and post developed conditions for each DA *(For projects using the Hydrology Manual complete the form below)*

Variables	Pre-developed DA1 *Use additional forms if there are more than 4 DMA*				Post-developed DA1 *Use additional forms if there are more than 4 DMA*			
	DA 1	DMA B	DMA C	DMA D	DA 1	DMA B	DMA C	DMA D
1 Length of flowpath (ft) *Use Form 3-2 Item 5 for pre-developed condition*								
2 Change in elevation (ft)								
3 Slope (ft/ft), S_o = *Item 2 / Item 1*								
4 Land cover								
5 Initial DMA Time of Concentration (min) *Appendix C-1 of the TGD for WQMP*								
6 Length of conveyance from DMA outlet to project site outlet (ft) *May be zero if DMA outlet is at project site outlet*								
7 Cross-sectional area of channel (ft^2)								
8 Wetted perimeter of channel (ft)								
9 Manning's roughness of channel (n)								
10 Channel flow velocity (ft/sec) V_{fps} = *(1.49 / Item 9) * (Item 7/Item 8)^0.67 * (Item 3)^0.5*								
11 Travel time to outlet (min) T_t = *Item 6 / (Item 10 * 60)*								
12 Total time of concentration (min) T_c = *Item 5 + Item 11*								
13 Pre-developed time of concentration (min):								
14 Post-developed time of concentration (min):								
15 Additional time of concentration needed to meet HCOC requirement (min):								

Form 4.2-5 HCOC Assessment for Peak Runoff

Compute peak runoff for pre- and post-developed conditions

Variables		Pre-developed DA to Project Outlet (*Use additional forms if more than 3 DMA*)			Post-developed DA to Project Outlet (*Use additional forms if more than 3 DMA*)		
		DMA A	DMA B	DMA C	DMA A	DMA B	DMA C
1 Rainfall Intensity for storm duration equal to time of concentration *I_{peak} = 10^(LOG Form 4.2-1 Item 4 - 0.6 LOG Form 4.2-4 Item 5 /60)*							
2 Drainage Area of each DMA (ft^2) *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
3 Ratio of pervious area to total area *For DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
4 Pervious area infiltration rate (in/hr) *Use pervious area CN and antecedent moisture condition with Appendix C-3 of the TGD for WQMP*							
5 Maximum loss rate (in/hr) *F_m = Item 3 * Item 4* *Use area-weighted F_m from DMA with outlet at project site outlet, include upstream DMA (Using example schematic in Form 3-1, DMA A will include drainage from DMA C)*							
6 Peak Flow from DMA (cfs) *Q_p =Item 2 * 0.9 * (Item 1 - Item 5)*							
7 Time of concentration adjustment factor for other DMA to site discharge point *Form 4.2-4 Item 12 DMA / Other DMA upstream of site discharge point (If ratio is greater than 1.0, then use maximum value of 1.0)*	DMA A	*n/a*			*n/a*		
	DMA B		*n/a*			*n/a*	
	DMA C			*n/a*			*n/a*

8 Pre-developed Q_p at T_c for DMA A: *Q_p = Item 6_{DMAA} + [Item 6_{DMAB} * (Item 1_{DMAA} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAA/2}$] + [Item 6_{DMAC} * (Item 1_{DMAA} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAA/3}$]*	9 Pre-developed Q_p at T_c for DMA B: *Q_p = Item 6_{DMAB} + [Item 6_{DMAA} * (Item 1_{DMAB} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAB/1}$] + [Item 6_{DMAC} * (Item 1_{DMAB} - Item 5_{DMAC})/(Item 1_{DMAC} - Item 5_{DMAC})* Item $7_{DMAB/3}$]*	10 Pre-developed Q_p at T_c for DMA C: *Q_p = Item 6_{DMAC} + [Item 6_{DMAA} * (Item 1_{DMAC} - Item 5_{DMAA})/(Item 1_{DMAA} - Item 5_{DMAA})* Item $7_{DMAC/1}$] + [Item 6_{DMAB} * (Item 1_{DMAC} - Item 5_{DMAB})/(Item 1_{DMAB} - Item 5_{DMAB})* Item $7_{DMAC/2}$]*
10 Peak runoff from pre-developed condition confluence analysis (cfs):	*Maximum of Item 8, 9, and 10 (including additional forms as needed)*	
11 Post-developed Q_p at T_c for DMA A: *Same as Item 8 for post-developed values*	12 Post-developed Q_p at T_c for DMA B: *Same as Item 9 for post-developed values*	13 Post-developed Q_p at T_c for DMA C: *Same as Item 10 for post-developed values*
14 Peak runoff from post-developed condition confluence analysis (cfs):	*Maximum of Item 11, 12, and 13 (including additional forms as needed)*	
15 Peak runoff reduction needed to meet HCOC Requirement (cfs):	*$Q_{p\text{-}HCOC}$ = (Item 14 * 0.95) – Item 10*	

4.3 Project Conformance Analysis

Complete the following forms for each project site DA to document that the proposed LID BMPs conform to the project DCV developed to meet performance criteria specified in the MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the MS4 Permit (see Section 5.3.1 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design and Hydrologic Source Controls (Form 4.3-2)
- Retention and Infiltration (Form 4.3-3)
- Harvested and Use (Form 4.3-4) or
- Biotreatment (Form 4.3-5).

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2.1 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Forms 4.3-2 and 4.3-4 to determine the feasibility of applicable HSC and harvest and use BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable HSC BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of LID HSC, retention and infiltration, and harvest and use BMPs are unable to mitigate the entire DCV, then biotreatment BMPs may be implemented by the project proponent. If biotreatment BMPs are used, then they must be sized to provide sufficient capacity for effective treatment of the remainder of the volume-based performance criteria that cannot be achieved with LID BMPs (TGD for WQMP Section 5.4.4.2). Under no circumstances shall any portion of the DCV be released from the site without effective mitigation and/or treatment.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

1 Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒

Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

2 Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒

(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than eight feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

3 Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

4 Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils?

Yes ☐ No ☒

If Yes, Provide basis: (attach)

5 Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

6 Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒

See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

7 Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒

If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Harvest and Use BMP. If no, then proceed to Item 9 below.

8 Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒

If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Hydrologic Source Control BMP. If no, then proceed to Item 9, below.

9 All answers to Item 1 through Item 6 are "No":

Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP. Proceed to Form 4.3-2, Hydrologic Source Control BMP.

4.3.1 Site Design Hydrologic Source Control BMP

Section XI.E. of the Permit emphasizes the use of LID preventative measures; and the use of LID HSC BMPs reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable HSC shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of HSC, if a project cannot feasibly meet BMP sizing requirements or cannot fully address HCOCs, feasibility of all applicable HSC must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Complete Form 4.3-2 to identify and calculate estimated retention volume from implementing site design HSC BMP. Refer to Section 5.4.1 in the TGD for more detailed guidance.

Form 4.3-2 Site Design Hydrologic Source Control BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3): *$V_{retention}$ =Sum of Item 4 for all BMPs*			
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)			
8 Ponding depth (ft)			
9 Surface area of amended soil/gravel (ft^2)			
10 Average depth of amended soil/gravel (ft)			
11 Average porosity of amended soil/gravel			
12 Retention volume achieved from on-lot infiltration (ft^3) *$V_{retention}$ = (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*			
13 Runoff volume retention from on-lot infiltration (ft^3): *$V_{retention}$ =Sum of Item 12 for all BMPs*			

Form 4.3-2 cont. Site Design Hydrologic Source Control BMPs (DA 1)

14 Implementation of evapotranspiration BMP (green, brown, or blue roofs): Yes ☐ No ☒ *If yes, complete Items 15-20. If no, proceed to Item 21*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Rooftop area planned for ET BMP (ft^2)			
16 Average wet season ET demand (in/day) *Use local values, typical ~ 0.1*			
17 Daily ET demand (ft^3/day) *Item 15 * (Item 16 / 12)*			
18 Drawdown time (hrs) *Copy Item 6 in Form 4.2-1*			
19 Retention Volume (ft^3) *$V_{retention}$ = Item 17 * (Item 18 / 24)*			
20 Runoff volume retention from evapotranspiration BMPs (ft^3): 0 ft^3 *$V_{retention}$ =Sum of Item 19 for all BMPs*			
21 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 20-2. If no, proceed to Item 24*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
22 Number of Street Trees			
23 Average canopy cover over impervious area (ft^2)			
24 Runoff volume retention from street trees (ft^3) *$V_{retention}$ = Item 22 * Item 23 * (0.05/12) assume runoff retention of 0.05 inches*			
25 Runoff volume retention from street tree BMPs (ft^3): 0 ft^3 *$V_{retention}$ = Sum of Item 24 for all BMPs*			
26 Implementation of residential rain barrels/cisterns: Yes ☐ No ☒ *If yes, complete Items 27-28; If no, proceed to Item 29*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
27 Number of rain barrels/cisterns			
28 Runoff volume retention from rain barrels/cisterns (ft^3) *$V_{retention}$ = Item 27 * 3*			
29 Runoff volume retention from residential rain barrels/Cisterns (ft3): 0 ft^3 *$V_{retention}$ =Sum of Item 28 for all BMPs*			
30 Total Retention Volume from Site Design Hydrologic Source Control BMPs: 0 ft^3 *Sum of Items 5, 13, 20, 25 and 29*			

4.3.2 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix D of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5.1 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

Form 4.3-3 Infiltration LID BMP – Infiltration Basin (Basin-1, 2)

1 Remaining LID DCV not met by site design HSC BMP (ft^3): 83,695 ft^3 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30*			
BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DMA-1 BMP Type Inf. Basin-1	DMA-2 BMP Type Inf. Basin-2	DA DMA BMP Type
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix D of the TGD for WQMP for minimum requirements for assessment methods*	12.995	12.995	
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	4	4	
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	3.25	3.25	
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48	48	
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*	8.0 ft	8.0 ft	
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	2.0 ft	2.0 ft	
8 Infiltrating surface area, SA_{BMP} (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	22,319 sq-ft	9,348 sq-ft	
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	-	-	
10 Amended soil porosity	-	-	
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	0	0	
12 Gravel porosity	0.4	0.4	
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3	3	
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	62,772	26,291	
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*	0 ft^3	0 ft^3	
16 Total Retention Volume from LID Infiltration BMPs: 89,063 ft^3 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*			
17 Fraction of DCV achieved with infiltration BMP: 106.4 % *Retention% = Item 16 / Form 4.2-1 Item 7*			
18 Is full LID DCV retained on-site with combination of hydrologic source control and LID retention and infiltration BMPs? Yes ☒ No ☐ *If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.*			

Please refer below for Infiltration BAsin-1,2 Capacity Calculation

Infiltration Basin-1 Capacity Calculation:

Surface Area	22,319	SF	Avg Area of inf. Surface
Rock Depth	0	FT	at mid water surface
Surface Depth	2	FT	
Infiltration	*0.8125*	*FT*	Inf. In 3 hr during basin filling [3* (3.25/12)]
Volume Provided	62772	CF	
Volume Needed	*67,040*	*CF*	
Difference	4,268	CF	

Infiltration Basin-2 Capacity Calculation:

Surface Area	9348	SF	Avg Area of inf. Surface
Rock Depth	0	FT	at mid water surface
Surface Depth	2	FT	
Infiltration	*0.8125*	*FT*	Inf. In 3 hr during basin filling [3* (3.25/12)]
Volume Provided	26291	CF	
Volume Needed	*20,923*	*CF*	
Difference	5,368	CF	

Treated volume is 106.7% of the volume needed.

Infiltration Drawdown Time Calculation:

Infiltration Surface Area Provided:	31,667	SF	
Infiltration Rate per Soil Report	12.995	in/hr	(Average Infiltration Rate Per WebSoil Report)
	1.08	ft/hr	
Facor of Safety	4		
Design Infiltration Rate	0.271	ft/hr	
Volume needed to be Infiltrated	83,695	cu.ft	
Infiltration Volume per hour	8573.18	cu.ft/hr	(31,667 sft * 0.271 ft/hr)
Infiltration Draw Down Time	9.76	Hours	(83,695 cu.ft / 8573.18 cu.ft/hr)
			< 48 hr draw down time. OK

San Bernardino County Southwestern Part, California

SpC—Soboba stony loamy sand, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hckv
Elevation: 960 to 3,690 feet
Mean annual precipitation: 12 to 39 inches
Mean annual air temperature: 60 to 65 degrees F
Frost-free period: 260 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Soboba and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Soboba

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

Ap - 0 to 10 inches: stony loamy sand
C1 - 10 to 24 inches: very stony loamy sand
C2 - 24 to 60 inches: very stony sand

Properties and qualities

Slope: 2 to 9 percent
Percent of area covered with surface fragments: 0.1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 19.99 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hanford

Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tujunga, gravelly loamy sand

Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ramona

Percent of map unit: 5 percent
Landform: Fan remnants
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 10, Sep 12, 2018

Worksheet H: Factor of Safety and Design Infiltration Rate and Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment methods	0.25	3	0.75
		Predominant soil texture	0.25	2	0.50
		Site soil variability	0.25	2	0.50
		Depth to groundwater / impervious layer	0.25	1	0.25
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			2.00
B	Design	Tributary area size	0.25	3	0.75
		Level of pretreatment/ expected sediment loads	0.25	1	0.25
		Redundancy	0.25	3	0.75
		Compaction during construction	0.25	1	0.25
		Design Safety Factor, $S_B = \Sigma p$			2.00
Combined Safety Factor, $S_{TOT} = S_A \times S_B$ = 2.0 x 2.0					4.00
Measured Infiltration Rate, inch/hr, K_M (corrected for test-specific bias)					12.995
Design Infiltration Rate, in/hr, $K_{DESIGN} = S_{TOT} \times K_M$					3.25 "/hr

Supporting Data

Briefly describe infiltration test and provide reference to test forms:

Avg. Perc Rate = $\frac{(6+19.99)}{2}$ = 12.995 "/hr
Perc Rate extracted From USDA Web soil survey.
Will Revise Actual Perc. Rate with the Final WQMP.

Note: The minimum combined adjustment factor shall not be less than 2.0 and the maximum combined adjustment factor shall not exceed 9.0.

4.3.3 Harvest and Use BMP

Harvest and use BMP may be considered if the full LID DCV cannot be met by maximizing infiltration BMPs. Use Form 4.3-4 to compute on-site retention of runoff from proposed harvest and use BMPs.

Volume retention estimates for harvest and use BMPs are sensitive to the on-site demand for captured stormwater. Since irrigation water demand is low in the wet season, when most rainfall events occur in San Bernardino County, the volume of water that can be used within a specified drawdown period is relatively low. The bottom portion of Form 4.3-4 facilitates the necessary computations to show infeasibility if a minimum incremental benefit of 40 percent of the LID DCV would not be achievable with MEP implementation of on-site harvest and use of stormwater (Section 5.5.4 of the TGD for WQMP).

Form 4.3-4 Harvest and Use BMPs – Not used

1 Remaining LID DCV not met by site design HSC or infiltration BMP (ft^3): *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16*			
BMP Type(s) *Compute runoff volume retention from proposed harvest and use BMP (Select BMPs from Table 5-4 of the TGD for WQMP) - Use additional forms for more BMPs*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Describe cistern or runoff detention facility			
3 Storage volume for proposed detention type (ft^3) *Volume of cistern*			
4 Landscaped area planned for use of harvested stormwater (ft^2)			
5 Average wet season daily irrigation demand (in/day) Use local values, typical ~ 0.1 in/day			
6 Daily water demand (ft^3/day) *Item 4 * (Item 5 / 12)*			
7 Drawdown time (hrs) *Copy Item 6 from Form 4.2-1*			
8 Retention Volume (ft^3) *$V_{retention}$ = Minimum of (Item 3) or (Item 6 * (Item 7 / 24))*			
9 Total Retention Volume (ft^3) from Harvest and Use BMP *Sum of Item 8 for all harvest and use BMP included in plan*			
10 Is the full DCV retained with a combination of LID HSC, retention and infiltration, and harvest and use BMPs? Yes ☐ No ☐ *If yes, demonstrate conformance using Form 4.3-10. If no, then re-evaluate combinations of all LID BMP and optimize their implementation such that the maximum portion of the DCV is retained on-site (using a single BMP type or combination of BMP types). If the full DCV cannot be mitigated after this optimization process, proceed to Section 4.3.4.*			

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration, and harvest and use BMPs. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-5 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV w. Biotreatment computations are included as follows:

- Use Form 4.3-6 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-7 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-8 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-5 Selection and Evaluation of Biotreatment BMP - Not used

1 Remaining LID DCV not met by site design HSC, infiltration, or harvest and use BMP for potential biotreatment (ft^3): 0 *Form 4.2-1 Item 7 - Form 4.3-2 Item 30 – Form 4.3-3 Item 16- Form 4.3-4 Item 9*	List pollutants of concern *Copy from Form 2.3-1.*	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-6 and 4.3-7 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-8 to compute treated volume*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet extended detention ☐ Dry extended detention	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): 0 *Form 4.3-6 Item 15 + Form 4.3-7 Item 13* Full DCV achieved by using Retention/Infiltration BMPs. Volume based Biotreatment BMPs not used in this project.	4 Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	5 Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

Form 4.3-6 Volume Based Biotreatment– Not used
Bioretention and Planter Boxes with Underdrains

Biotreatment BMP Type *(Bioretention w/underdrain, planter box w/underdrain, other comparable BMP)*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*			
2 Amended soil infiltration rate *Typical ~ 5.0*			
3 Amended soil infiltration safety factor *Typical ~ 2.0*			
4 Amended soil design percolation rate (in/hr) P_{design} *= Item 2 / Item 3*			
5 Ponded water drawdown time (hr) *Copy Item 6 from Form 4.2-1*			
6 Maximum ponding depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Ponding Depth (ft) d_{BMP} *= Minimum of (1/12 * Item 4 * Item 5) or Item 6*			
8 Amended soil surface area (ft^2)			
9 Amended soil depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Amended soil porosity, *n*			
11 Gravel depth (ft) *see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
12 Gravel porosity, *n*			
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*			
14 Biotreated Volume (ft^3) $V_{biotreated}$ *= Item 8 * [(Item 7/2) + (Item 9 * Item 10) +(Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*			
15 Total biotreated volume from bioretention and/or planter box with underdrains BMP: *Sum of Item 14 for all volume-based BMPs included in this form*			

Form 4.3-7 Volume Based Biotreatment– Not used Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft^2) A_{bottom} = *Item 2 * Item 3*				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft^2) $A_{surface}$ =*(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))*				
8 Storage volume (ft^3) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =*Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]*				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = *(Item* $8_{forebay}$ + *Item* 8_{basin}*) / (Item 9 * 3600)*				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft^3) $V_{biotreated}$ = *(Item* $8_{forebay}$ + *Item* 8_{basin}*) +(Item 10 * Item 11 * 3600)*				
13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention : *(Sum of Item 12 for all BMP included in plan)*				

Form 4.3-8 Flow Based Biotreatment - Not used			
Biotreatment BMP Type *Vegetated swale, vegetated filter strip, or other comparable proprietary BMP*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
1 Pollutants addressed with BMP *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in TGD Table 5-5*			
2 Flow depth for water quality treatment (ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
3 Bed slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
4 Manning's roughness coefficient			
5 Bottom width (ft) *b_w = (Form 4.3-5 Item 6 * Item 4) / (1.49 * Item 2^1.67 * Item 3^0.5)*			
6 Side Slope (ft/ft) *BMP specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
7 Cross sectional area (ft^2) *A = (Item 5 * Item 2) + (Item 6 * Item 2^2)*			
8 Water quality flow velocity (ft/sec) *V = Form 4.3-5 Item 6 / Item 7*			
9 Hydraulic residence time (min) *Pollutant specific, see Table 5-6 of the TGD for WQMP for reference to BMP design details*			
10 Length of flow based BMP (ft) *L = Item 8 * Item 9 * 60*			
11 Water surface area at water quality flow depth (ft^2) *SA_{top} = (Item 5 + (2 * Item 2 * Item 6)) * Item 10*			

4.3.5 Conformance Summary

Complete Form 4.3-9 to demonstrate how on-site LID DCV is met with proposed site design hydrologic source control, infiltration, harvest and use, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-9 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 83,695 ft^3 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design hydrologic source control LID BMP (ft^3): 0 ft^3 *Copy Item 30 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 89,063 ft^3 *Copy Item 16 in Form 4.3-3*

4 On-site retention with LID harvest and use BMP (ft^3): 0 ft^3 *Copy Item 9 in Form 4.3-4*

5 On-site biotreatment with volume based biotreatment BMP (ft^3): 0 ft^3 *Copy Item 3 in Form 4.3-5*

6 Flow capacity provided by flow based biotreatment BMP (cfs): 0 ft^3 *Copy Item 6 in Form 4.3-5*

7 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design HSC, infiltration, or harvest and use BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☐
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- § On-site retention and infiltration is determined to be infeasible and biotreatment BMP provide biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☐
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

8 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of HSC, retention and infiltration, harvest and use, and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes for Form 4.3-5 Item 7, Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*
- An approved Watershed Action Plan (WAP) demonstrates that water quality and hydrologic impacts of urbanization are more effective when managed in at an off-site facility: ☐
  Attach appropriate WAP section, including technical documentation, showing effectiveness comparisons for the project site and regional watershed

4.3.6 Hydromodification Control BMP

Use Form 4.3-10 to compute the remaining runoff volume retention, after LID BMP are implemented, needed to address HCOC, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential HCOC. Describe hydromodification control BMP that address HCOC, which may include off-site BMP and/or in-stream controls. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

Form 4.3-10 Hydromodification Control BMPs

1 Volume reduction needed for HCOC performance criteria (ft^3): *(Form 4.2-2 Item 4 * 0.95) – Form 4.2-2 Item 1*	2 On-site retention with site design hydrologic source control, infiltration, and harvest and use LID BMP (ft^3): *Sum of Form 4.3-9 Items 2, 3, and 4 Evaluate option to increase implementation of on-site retention in Forms 4.3-2, 4.3-3, and 4.3-4 in excess of LID DCV toward achieving HCOC volume reduction*
3 Remaining volume for HCOC volume capture (ft^3): *Item 1 – Item 2*	4 Volume capture provided by incorporating additional on-site or off-site retention BMPs (ft^3): *Existing downstream BMP may be used to demonstrate additional volume capture (if so, attach to this WQMP a hydrologic analysis showing how the additional volume would be retained during a 2-yr storm event for the regional watershed)*

5 If Item 4 is less than Item 3, incorporate in-stream controls on downstream waterbody segment to prevent impacts due to hydromodification ☐ *Attach in-stream control BMP selection and evaluation to this WQMP*

6 Is Form 4.2-2 Item 11 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate increase in time of concentration achieved by proposed LID site design, LID BMP, and additional on-site or off-site retention BMP ☐
  BMP upstream of a waterbody segment with a potential HCOC may be used to demonstrate increased time of concentration through hydrograph attenuation (if so, show that the hydraulic residence time provided in BMP for a 2-year storm event is equal or greater than the addition time of concentration requirement in Form 4.2-4 Item 15)
- Increase time of concentration by preserving pre-developed flow path and/or increase travel time by reducing slope and increasing cross-sectional area and roughness for proposed on-site conveyance facilities ☐
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

7 Form 4.2-2 Item 12 less than or equal to 5%: Yes ☐ No ☐

If yes, HCOC performance criteria is achieved. If no, select one or more mitigation options below:

- Demonstrate reduction in peak runoff achieved by proposed LID site design, LID BMPs, and additional on-site or off-site retention BMPs ☐
  BMPs upstream of a waterbody segment with a potential HCOC may be used to demonstrate additional peak runoff reduction through hydrograph attenuation (if so, attach to this WQMP, a hydrograph analysis showing how the peak runoff would be reduced during a 2-yr storm event)
- Incorporate appropriate in-stream controls for downstream waterbody segment to prevent impacts due to hydromodification, in a plan approved and signed by a licensed engineer in the State of California ☐

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, harvest and use, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance. Alternative compliance plans may include one or more of the following elements:

- On-site structural treatment control BMP - All treatment control BMP should be located as close to possible to the pollutant sources and should not be located within receiving waters;
- Off-site structural treatment control BMP - Pollutant removal should occur prior to discharge of runoff to receiving waters;
- Urban runoff fund or In-lieu program, if available

Depending upon the proposed alternative compliance plan, approval by the executive officer may or may not be required (see Section 6 of the TGD for WQMP).

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMP included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and may require a Maintenance Agreement (consult the jurisdiction's LIP). If a Maintenance Agreement is required, it must also be attached to the WQMP.

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Infiltration Basin-1,2	Ridge Development Company, L.L.C..	Remove accumulated trash and debris in the basin at the start and end of the wet season. Inspect for standing water at the end of the wet season. Trim vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons. Remove accumulated sediment and regrade when the accumulated sediment volume exceeds 10% of the basin. If erosion is occurring within the basin, re-vegetate immediately and stabilize with an erosion control mulch or mat until vegetation cover is established	2 times a year at the beginning and end of the rainy season (October to March)

Education of Property Owners, Tenants and Occupants on Stormwater BMPs	Ridge Development Company, L.L.C.. .	Practical education materials will be provided to property owners covering various water quality issues that will need to be addressed on their specific site. These materials will include general good house keeping practices that contribute to the protection of storm water quality and BMP's that eliminate or reduce pollution during property improvements.	At Property sale/transfer
Landscape maintenance	Ridge Development Company, L.L.C..	All inlet will have visual inspection and cleaning of any Debris	Monthly
BMP maintenance	. Ridge Development Company, L.L.C..	See BMP fact sheets and Table 5-1 details hereon	At construction
Spill contingency plan	Ridge Development Company, L.L.C..	The spill contingency plan shall be provided in accordance with Section 6.95 of the California Health and Safety Code.	At construction. Ongoing with every visit
Litter debris control program	Ridge Development Company, L.L.C..	Litter debris control program may be developed by City of Fontana	By weekly
Employee training	Ridge Development Company, L.L.C..	Employee training may be developed by City of Fontana	Ongoing
Catch basin inspection program	Ridge Development Company, L.L.C..	Catch basins will be inspected a minimum of once every three months during the dry season and a minimum of once every two months during the rainy season.	Inspect once a year
Provide storm drain system stencilling and signage	Ridge Development Company, L.L.C..	Signs will be placed above storm drain inlets to warn the public of prohibitions against waste disposal	Once a year or according to Manufacturer Manuals

Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	Ridge Development Company, L.L.C.. .	Rain sensors will be incorporated into the onsite sprinkler system so that no unnecessary watering of landscaped areas occurs after storm events. Landscape planning is implemented to reduce groundwater and storm water contamination. This will be accomplished through an infiltration basin, and landscape areas.	Once a year or according to Manufacturer Manuals Bi Monthly
Street sweeping and Vaccuming	Ridge Development Company, L.L.C..	Street sweeping and vaccuming schedule will be per the Vity of Fontana Community Facilities District.	

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their local Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

6.4 Other Supporting Documentation

- BMP Educational Materials
- Activity Restriction – C, C&R's & Lease Agreements

Section 6

WQMP Certification

6.1 Certification

"This Water Quality Management Plan has been prepared for RIDGE DEVELOPMENT COMPANY, L.L.C. by Allard Engineering. It is intended to comply with the requirements of the County of San Bernardino for Rancho Palma Project requiring the preparation of a Water Quality Management Plan (WQMP). The undersigned is aware that Best Management Practices (BMPs) are enforceable pursuant to the City's Water Quality Ordinance. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with San Bernardino County's Municipal Stormwater Management Program and the intent of the NPDES Permit for San Bernardino County and the incorporated cities of San Bernardino County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity. "

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

RIDGE DEVELOPMENT COMPANY, L.L.C.

By: RIDGE DEVELOPMENT COMPANY, L.L.C.

By: _____ Date: _____

Name: Dennis Rice

Applicant Telephone Number: (951) 751-5700

Certifications

I certify under penalty of law that this document and all the attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations

Developer's Project Engineer Signature

_____ _____
Signature Date

I/we certify that I/we am/are the legal owner of the project and hereby accept the responsibility for the implementation of the provisions of the SWQMP as long as I/we retain ownership of this property and that upon the sale of this land, I/we will deliver this plan to the future owner and inform him of the requirement to implement the plan.

Owner(s) Signature

RIDGE DEVELOPMENT COMPANY, L.L.C.

By: _____ Date: _____

Name: Dennis Rice

For the use by County of San Bernardino

Environmental Section Approval of SWQMP

I, and /or personnel acting under my direction and supervision, have reviewed this SWQMP and find that it meets the requirements set forth in the County of San Bernardino's Storm Water Ordinance.

Acceptance or approval of this Storm Water Quality Management Plan in no way precludes the authority of this agency to require modification to the plan as conditions warrant nor does this agency take responsibility for performance of BMP's provided for in the plan.

_____ _____
Signature Date of SWQMP approval

RECORDING REQUESTED BY:

CITY OF FONTANA
ENGINEERING DEPARTMENT
8353 SIERRA AVENUE,
FONTANA CA 92335

SPACE ABOVE FOR RECORDER'S USE ONLY

Memorandum of Agreement for Water Quality Management Plan and Storm Water BMP Transfer, Access and Maintenance

OWNER/APPLICANT NAME: _____
PROPERTY ADDRESS: _____

_____

APN: _____

THIS Memorandum of Agreement hereinafter referred to as "Agreement" is made and entered on this _____ day of _____, _____ by the undersigned herein after referred to as "Owner" and the City of Fontana, a municipal corporation, located in the County of San Bernardino, State of California hereinafter referred to as "CITY";

WHEREAS, the Owner owns real property ("Property") in the City of Fontana, County of San Bernardino, State of California, more specifically described in Exhibit "A" and depicted in Exhibit "B", each of which exhibits is attached hereto and incorporated herein by this reference;

WHEREAS, at the time of initial approval of development project within the Property described above, the City required the project to employ Best Management Practices, hereinafter referred to as "BMPs," to minimize pollutants in urban runoff;

WHEREAS, the Owner has chosen to install and/or implement BMPs as described in the Water Quality Management Plan as described in Exhibit "C" and on file with the City, hereinafter referred to as "WQMP", to minimize pollutants in urban runoff and to minimize other adverse impacts of urban runoff;

WHEREAS, said WQMP has been certified by the Owner and reviewed and approved by the City;

WHEREAS, said BMPs, with installation and/or implementation on private property and draining only private property, are part of a private facility with all maintenance or replacement, therefore, the sole responsibility of the Owner;

WHEREAS, the Owner is aware that periodic and continuous maintenance, including, but not necessarily limited to, filter material replacement and sediment removal, is required to assure peak performance of all BMPs in the WQMP and that, furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations, including those pertaining to confined space and waste disposal methods, in effect at the time such maintenance occurs;

NOW THEREFORE, it is hereby agreed by the Owner as follows:

1. Owner hereby provides the City of City's designee complete access, of any duration, to the BMPs and their immediate vicinity at any time, upon reasonable notice, or in the event of emergency, as determined by City's Director of Public Works no advance notice, for the purpose of inspection, sampling, testing of the Device, and in case of emergency, to undertake all necessary repairs or other preventative measures at owner's expense as provided in paragraph 3 below. City shall make every effort at all times to minimize or avoid interference with Owner's use of the Property.

2. Owner shall use its best efforts diligently to maintain all BMPs in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by Owner and Owner's representative or contractor in the removal and extraction of any material(s) from the BMPs and the ultimate disposal of the material(s) in a manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the City, the Owner shall provide the City with documentation identifying the material(s) removed, the quantity, and disposal destination.

3. In the event Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within five (5) days of being given written notice by the City, the City is hereby authorized to cause any maintenance necessary to be done and charge the entire cost and expense to the Owner or Owner's successors or assigns, including administrative costs, attorneys fees and interest thereon at the maximum rate authorized by the Civil Code from the date of the notice of expense until paid in full.

4. the Owner agrees to hold the City, its officials, officers, employees, volunteers, and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage, or injury, in law or equity, to property or persons, arising from the imposition of the plan by the City;

5. The City may require the owner to post security in form and for a time period satisfactory to the city to guarantee the performance of the obligations state herein. Should the Owner fail to perform the obligations under the Agreement, the City may, in the case of a cash bond, act for the Owner using the proceeds from it, or in the case of a surety bond, require the sureties to perform the obligations of the Agreement. As an additional remedy, the Director may withdraw any previous storm water-related approval with respect to the property on which BMPs have been installed and/or implemented until such time as Owner repays to City its reasonable costs incurred in accordance with paragraph 3 above.

6. This agreement shall be recorded in the Office of the Recorder of San Bernardino County, California, at the expense of the Owner and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth, and also a lien in such amount as will fully reimburse the City, including interest as herein above set forth, subject to foreclosure in event of default in payment.

7. In event of legal action occasioned by any default or action of the Owner, or its successors or assigns, then the Owner and its successors or assigns agree(s) to pay all costs incurred by the City in enforcing the terms of this Agreement, including reasonable attorney's fees and costs, and that the same shall become a part of the lien against said Property.

8. It is the intent of the parties hereto that burdens and benefits herein undertaken shall constitute covenants that run with said Property and constitute a lien there against.

9. The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto. The term "Owner" shall include not only the present Owner, but also its heirs, successors, executors, administrators, and assigns. Owner shall notify any successor to title of all or part of the Property about the existence of this Agreement. Owner shall provide such notice prior to such successor obtaining an interest in all or part of the Property. Owner shall provide a copy of such notice to the City at the same time such notice is provided to the successor.

10. This Agreement shall not be amended, modified or terminated without the prior written consent of the City, which consent to be effective, shall be contained in a document executed by the City and recorded against the Real Property.

OWNER:

Owner/Applicant Name: _____

Owner/Applicant Signature: _____

Date: _____

NOTARY

Notary acknowledgement is required for recordation (attach appropriate acknowledgement).

(INSERT NOTARY ACKNOWLEDGEMENT PAGE HERE)

EXHIBIT A
(Legal Description)

EXHIBIT "A"
LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA AND IS DESCRIBED AS FOLLOWS:

PARCEL A:

THE SOUTH 1/2 OF THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 5 WEST SAN BERNARDINO MERIDIAN, IN THE CITY OF FONTANA COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

EXCEPTING THEREFROM THE SOUTH 80 FEET.

ALSO EXCEPTING THEREFROM THE EAST 330 FEET.

ALSO EXCEPT THEREFROM ALL OF THE LAND DESCRIBED IN THE GRANT DEED RECORDED MAY 17, 2004, AS INSTRUMENT NO. 2004-0344658 OF OFFICIAL RECORDS.

PARCEL B:

NORTH 80 FEET OF THE SOUTH 410 FEET OF THE WEST 330 FEET OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 5, WEST, SAN BERNARDINO BASE AND MERIDIAN, IIN THE CITY OF FONTANA,, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND.

EXCEPTING THE WEST 30 FEET LYING WITHIN SIERRA AVE.

PARCEL C:

THE NORTH 530 FEET OF THE SOUTH 860 FEET OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 5 WEST, IN THE CITY OF FONTANA, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO GOVERNMENT SURVEY.

EXCEPT THE EAST 330 FEET THEREOF.

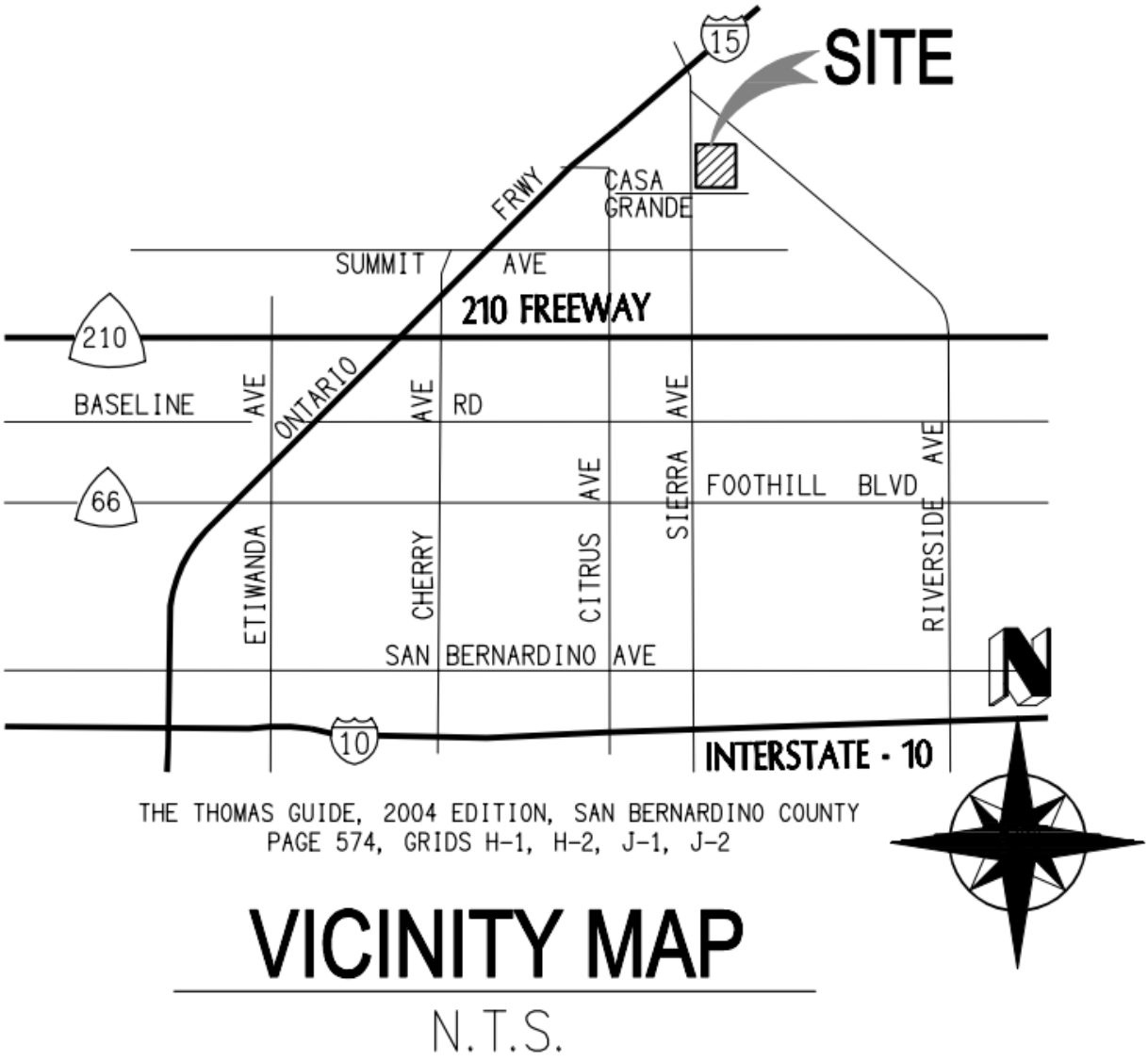
ALSO EXCEPT THE WEST 30 FEET THEREOF.

ALSO EXCEPT THE NORTH 80 FEET OF THE WEST 600 FEET THEREOF.

ALSO EXCEPT THE SOUTH 80 FEET OF THE WEST 330 FEET THEREOF.

APN: 0239-151-40-0-000, 0239-151-22-0-000, 0239-151-34-0-000

EXHIBIT B
(Map/illustration)



VICINITY MAP

N.T.S.

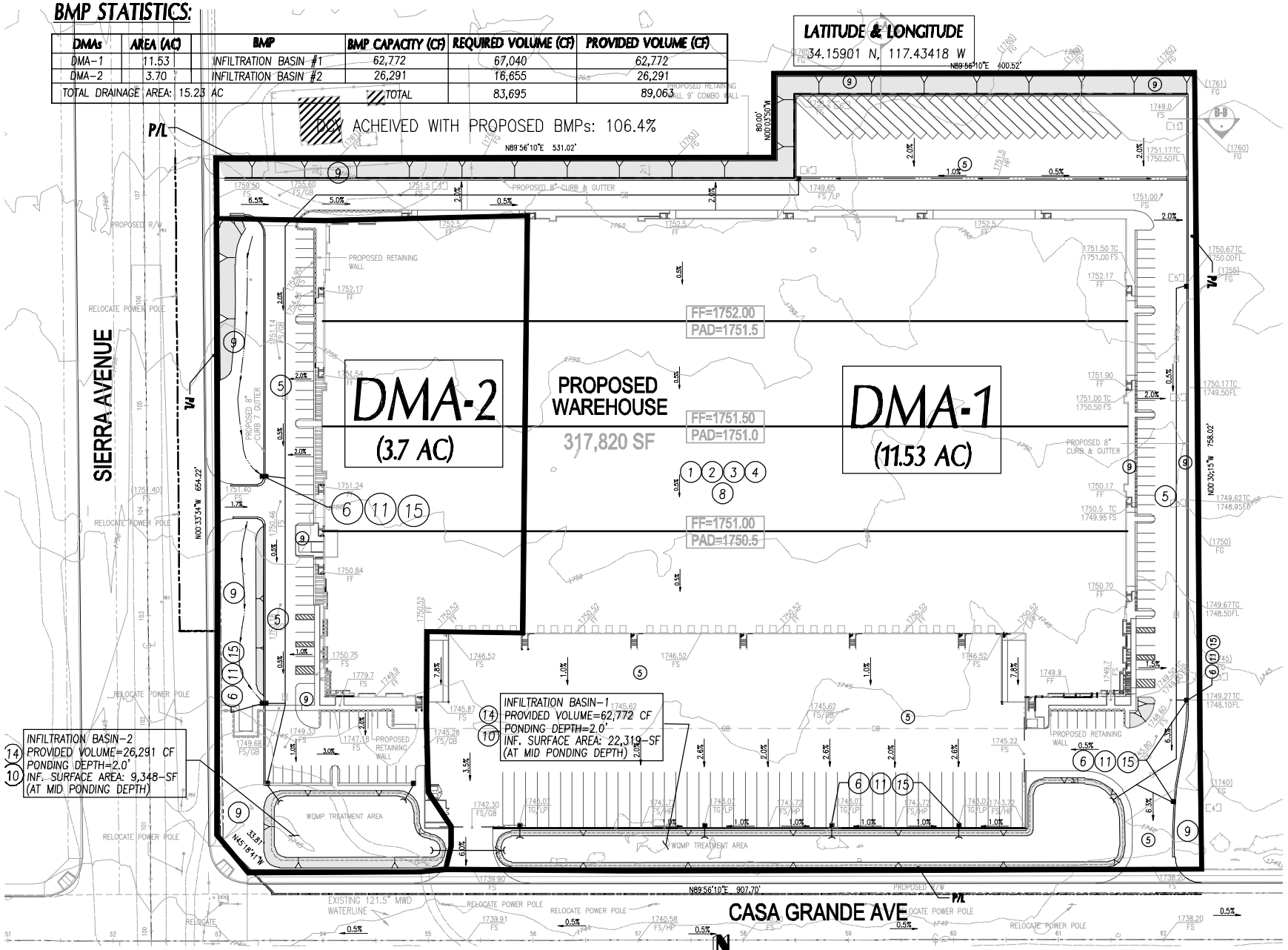
EXHIBIT C
WQMP Exhibit

BMP STATISTICS:

DMAs	AREA (AC)	BMP	BMP CAPACITY (CF)	REQUIRED VOLUME (CF)	PROVIDED VOLUME (CF)
DMA-1	11.53	INFILTRATION BASIN #1	62,772	67,040	62,772
DMA-2	3.70	INFILTRATION BASIN #2	26,291	16,655	26,291
TOTAL DRAINAGE AREA: 15.23 AC		TOTAL	83,695		89,063

DCV ACHEIVED WITH PROPOSED BMPs: 106.4%

LATITUDE & LONGITUDE
34.15901 N, 117.43418 W



BMP LIST:

1. EDUCATION OF PROPERTY OWNERS
2. ACTIVITY RESTRICTIONS
3. SPILL CONTINGENCY
4. TRAINING/EDUCATION PROGRAM
5. PARKING LOT SWEEPING/VACUUMING
6. COMMON AREA CATCH BASIN INSPECTION
7. LANDSCAPE PLANNING (SD-10)
8. ROOF RUNOFF CONTROLS (SD-11)
9. EFFICIENT IRRIGAION (SD-12)
10. STORM DRAIN SIGNAGE (SD-13)
11. INLET TRASH RACK
12. NOT USED.
13. TRASH STORAGE AREAS (SD-32)
14. INFILTRATION BASIN-1 & 2 (TC-11)
15. CATCH BASIN FILTER INSERT-ADS FLEXSTORM CATCH IT OR APPROVED EQUAL
16. TRAFFIC GRATE FILTER INSERT-OLDCASTLE FLOGARD INSERT FILTER OR APPROVED EQUAL

WQMP SITE PLAN EXHIBIT

Prepared By:
ALLARD ENGINEERING
Civil Engineering - Land Surveying - Land Planning
16866 Seville Avenue
Fontana, California 92335
(909) 356-1815 Fax (909) 356-1795

Educational Material

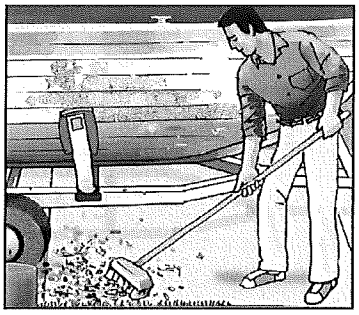
STORMWATER Pollution Prevention

PAINTING

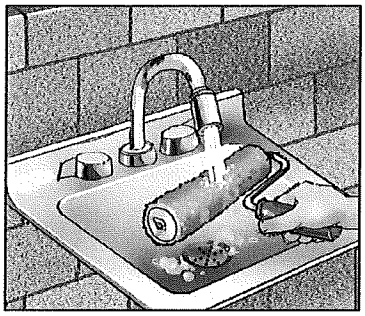
Paints, solvents, adhesives and other toxic chemicals used in painting often make their way into the San Bernardino County storm drain system and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these simple tips to prevent pollution and protect our health.



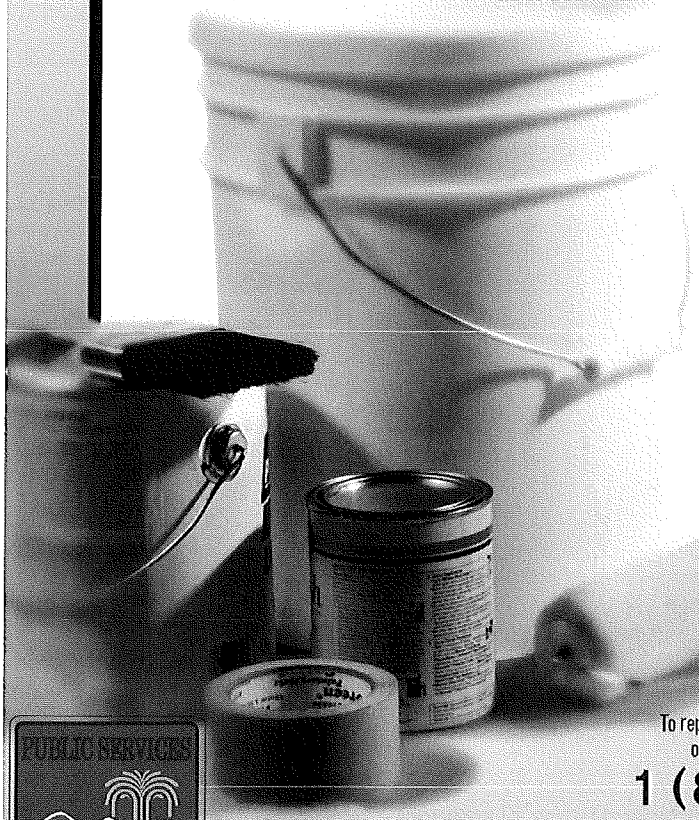
Water-Based Paints
Use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water."



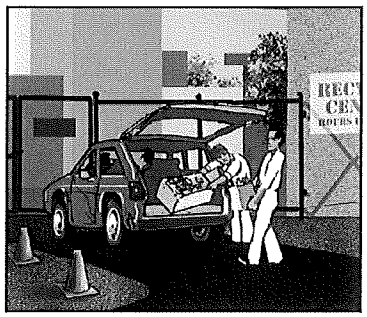
Paint Removal
Sweep up paint stripping residue, chips and dust instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.



Painting Cleanup
Never clean brushes or rinse paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which can be reused by putting it in a jar to settle out the paint particles and then pouring off the clear liquid for future use. Wrap dried paint residue in newspaper and dispose of it in the trash.



Exterior Paint Removal
When stripping or cleaning building exteriors with high-pressure water, block nearby storm drains and divert washwater onto a designated dirt area. Ask your local wastewater treatment authority if you can collect building cleaning water and discharge it to the sewer.



Recycling Paint
Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, city or community organization.

PUBLIC SERVICES
CITY OF FONTANA

To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

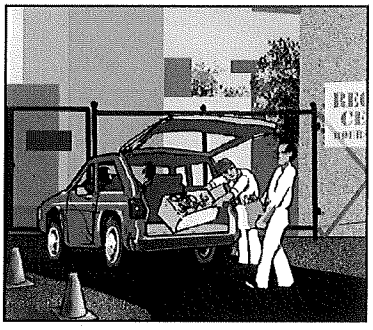
www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

STORMWATER Pollution Prevention

HOME & GARDEN

Yard waste and household toxics like paints and pesticides often make their way into the San Bernardino County storm drain system and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these simple tips to prevent pollution and protect your health.



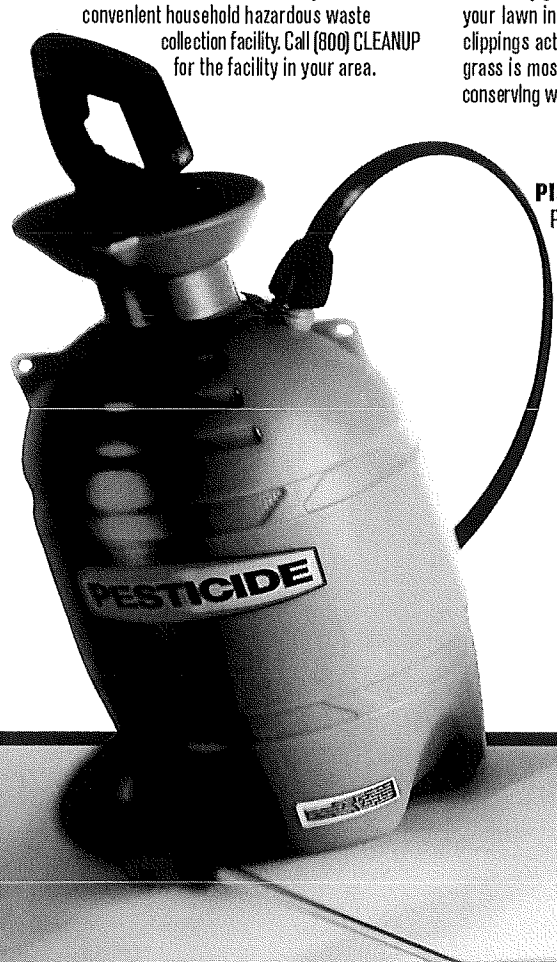
Recycle Household Hazardous Waste
Household products like paint, pesticides, solvents and cleaners are too dangerous to dump and too toxic to trash. Take them to be recycled at a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.



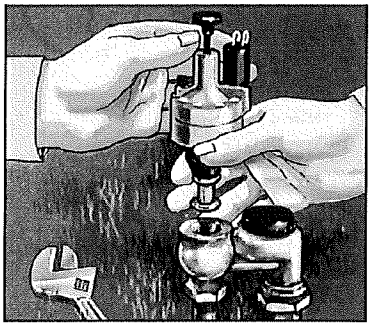
Disposing of Yard Waste
Recycle leaves, grass clippings and other yard waste, instead of blowing, sweeping or hosing into the street. Try grasscycling, leaving grass clippings on your lawn instead of using a grass catcher. The clippings act as a natural fertilizer, and because grass is mostly water, it also irrigates your lawn, conserving water.



Use Fertilizers & Pesticides Safely
Fertilizers and pesticides are often carried into the storm drain system by sprinkler runoff. Try using organic or non-toxic alternatives. If you use chemical fertilizers or pesticides, avoid applying near curbs and driveways and never apply before a rain.



Planting in the Yard
Produce less yard waste and save water by planting low maintenance, drought-tolerant trees and shrubs. Using drip irrigation, soaker hoses or micro-spray systems for flower beds and vegetation can also help reduce your water bill and prevent runoff.



Use Water Wisely
Cut your water costs and prevent runoff by controlling the amount of water and direction of sprinklers. The average lawn needs about an inch of water a week, including rainfall, or 10 to 20 minutes of watering. A half-inch per week is enough for fall and spring. Sprinklers should be on long enough to allow water to soak into the ground but not so long as to cause runoff.

PUBLIC SERVICES
CITY OF FONTANA

To report illegal dumping or for more information on stormwater pollution prevention, call:

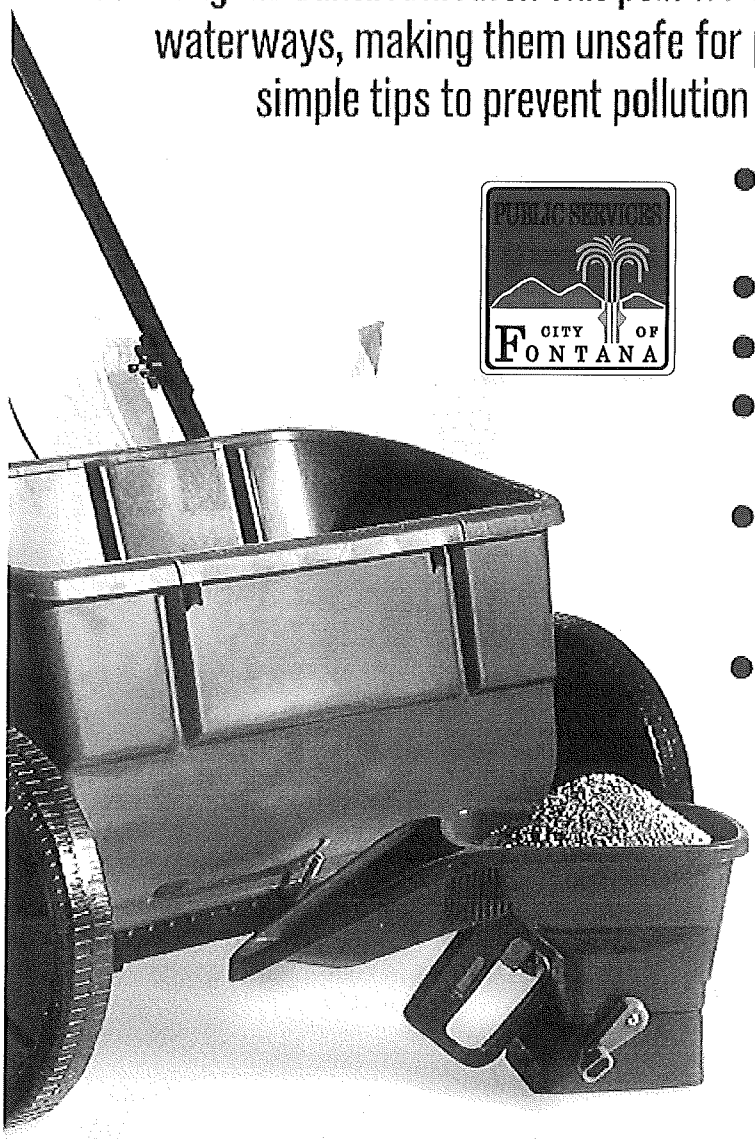
1 (800) CLEANUP

www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

Fertilizer Tips to Prevent Pollution

Water that runs off your lawn and garden can carry excess fertilizer into the San Bernardino County storm drain system, and it does not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these simple tips to prevent pollution and protect your health:



- Read the product label and follow the directions carefully, using only as directed.
- Avoid applying near driveways or gutters.
- Never apply fertilizer before a rain.
- Store fertilizers and chemicals in a covered area and in sealed, waterproof containers.
- Take unwanted lawn or garden chemicals to a household hazardous waste collection facility. Call (800) 253-2687.
- Use non-toxic products for your garden and lawn whenever possible.

To report illegal dumping or for more information on Stormwater pollution prevention, call:

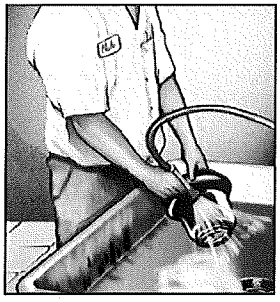
1 (800) CLEANUP

www.1800cleanup.org

STORMWATER Pollution Prevention

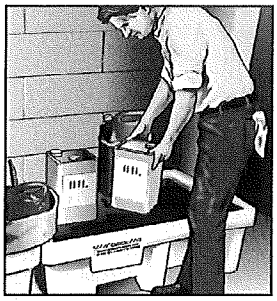
AUTO MAINTENANCE

Oil, grease, anti-freeze and other toxic automotive fluids often make their way into the San Bernardino County storm drain system, and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these best management practices to prevent pollution and protect public health.



Cleaning Auto Parts

Scrape parts with a wire brush or use a bake oven rather than liquid cleaners. Arrange drip pans, drying racks and drain boards so that fluids are directed back into the parts washer or the fluid holding tank. Do not wash parts or equipment in a shop sink, parking lot, driveway or street.



Storing Hazardous Waste

Keep your liquid waste segregated. Many fluids can be recycled via hazardous waste disposal companies if they are not mixed. Store all materials under cover with spill containment or inside to prevent contamination of rainwater runoff.



Metal Grinding and Polishing

Keep a bin under your lathe or grinder to capture metal filings. Send uncontaminated filings to a scrap metal recycler for reclamation. Store metal filings in a covered container or indoors.



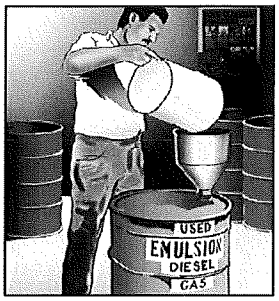
Preventing Leaks and Spills

Place drip pans underneath to capture fluids. Use absorbent cleaning agents instead of water to clean work areas.



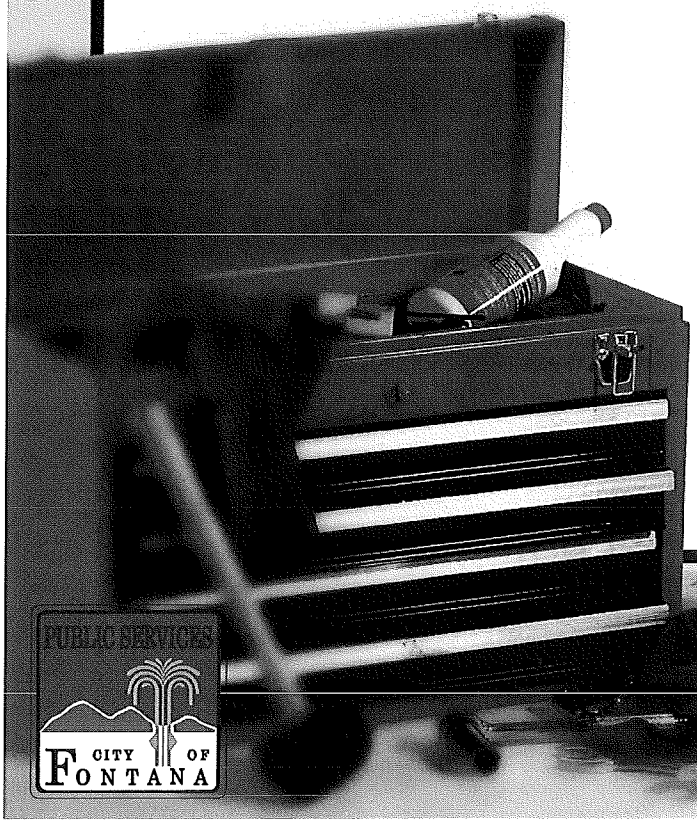
Cleaning Spills

Use dry methods for spill cleanup (sweeping, absorbent materials). Follow your hazardous materials response plan, as filed with your local fire department or other hazardous materials authority. Be sure that all employees are aware of the plan and are capable of implementing each phase. To report serious toxic spills, call 911.



Proper Disposal of Hazardous Waste

Recycle used motor oil and oil filters, anti-freeze and other hazardous automotive fluids, batteries, tires and metal filings collected from grinding or polishing auto parts. Contact a licensed hazardous waste hauler. For more recycling information, call (909) 386-8401.



PUBLIC SERVICES
CITY OF FONTANA

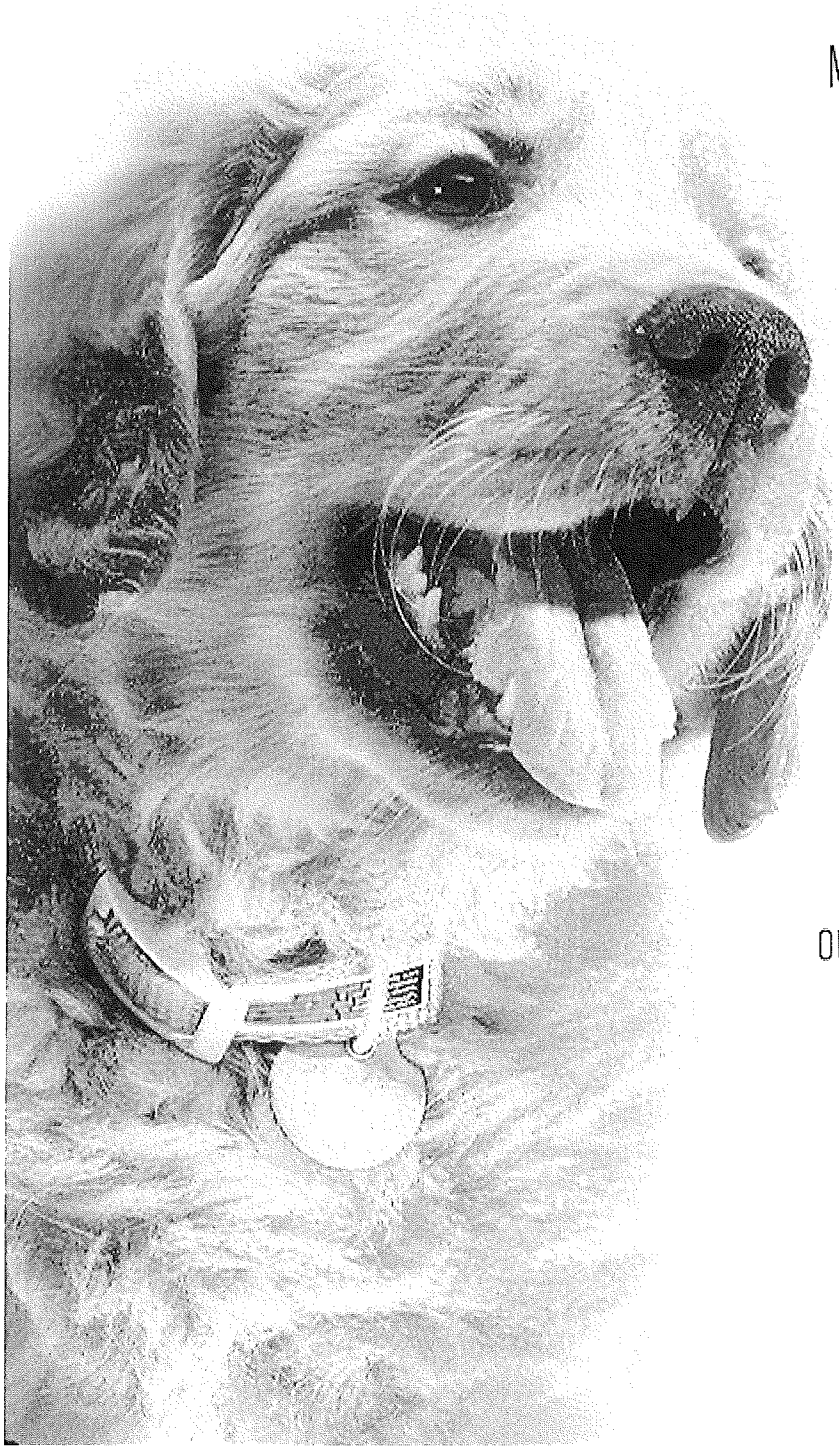
To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

Pick up after your pooch to curb pollution.



Maybe you weren't aware, but dog waste left on the ground gets into storm drains, polluting rivers, lakes and beaches.

The bacteria and risk of disease threatens the health of our kids and communities. Wherever you live in San Bernardino County, this pollution is a problem. The answer? Pick up after your dog, to help prevent pollution and protect our health. It's in your hands.

PUBLIC SERVICES
CITY OF FONTANA

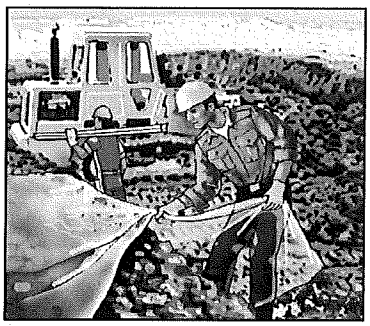
San Bernardino County
STORMWATER PROGRAM

♻ Printed on recycled paper

STORMWATER Pollution Prevention

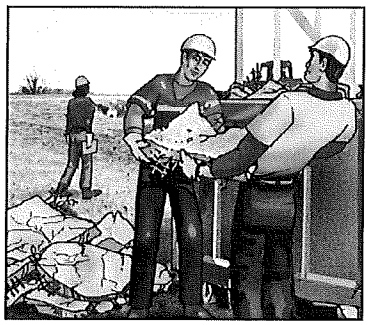
FRESH CONCRETE & MORTAR APPLICATION

Cement wash, sediment, vehicle fluids, dust and hazardous debris from construction sites often make their way into the San Bernardino County storm drain system and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these best management practices to prevent pollution and protect public health.



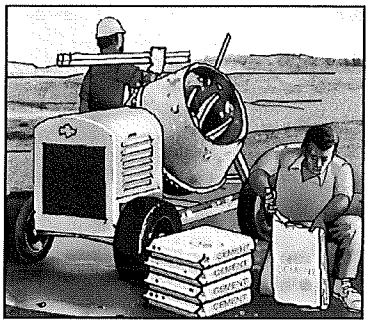
Storing Materials

Keep construction materials and debris away from the street, gutter and storm drains. Secure open bags of cement and cover exposed stockpiles of soil, sand or gravel and excavated material with plastic sheeting, protected from rain, wind and runoff.



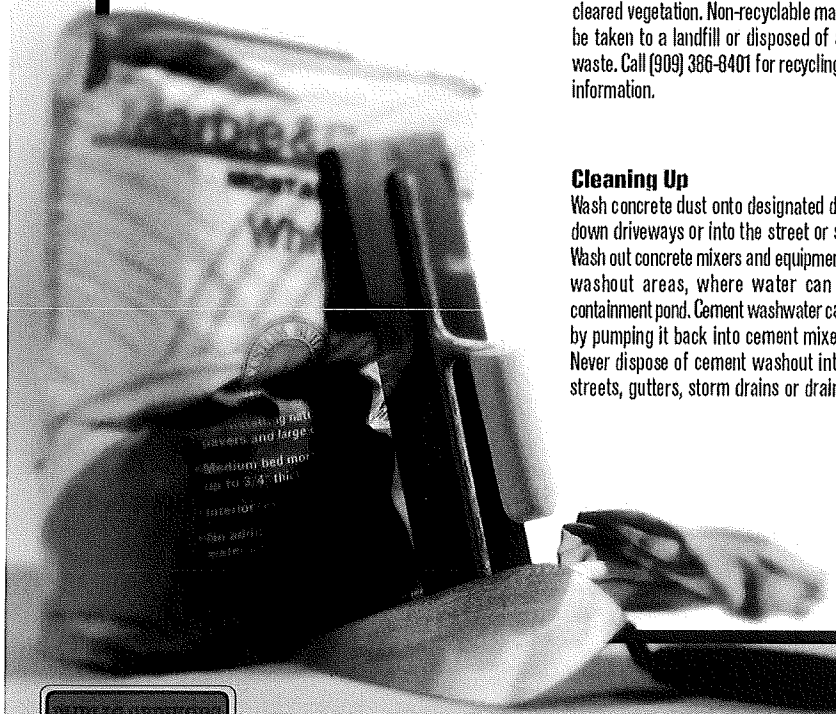
Ordering Materials & Recycling Waste

Reduce waste by ordering only tbe amounts of materials needed for the job. Use recycled or recyclable materials whenever possible. When breaking up paving, recycle the pieces at a crushing company. You can also recycle broken asphalt, concrete, wood, and cleared vegetation. Non-recyclable materials should be taken to a landfill or disposed of as hazardous waste. Call (909) 386-8401 for recycling and disposal information.



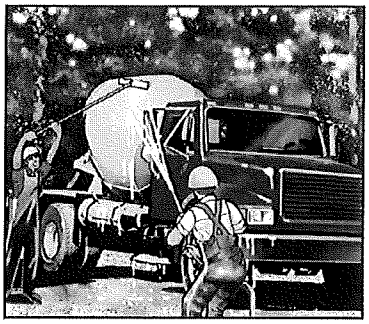
During Construction

Schedule excavation and grading during dry weather. Prevent mortar and cement from entering the street and storm drains by placing erosion controls. Setup small mixers on tarps or drop cloths, for easy cleanup of debris. Never bury waste material. Recycle or dispose of it as hazardous waste.



Cleaning Up

Wash concrete dust onto designated dirt areas, not down driveways or into the street or storm drains. Wash out concrete mixers and equipment in specified washout areas, where water can flow into a containment pond. Cement washwater can be recycled by pumping it back into cement mixers for reuse. Never dispose of cement washout into driveways, streets, gutters, storm drains or drainage ditches.



PUBLIC SERVICES
CITY OF FONTANA

To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

www.1800cleanup.org

San Bernardino County STORMWATER PROGRAM

STORMWATER Pollution Prevention

HOME REPAIR & REMODELING

Paints, solvents, adhesives and other toxic substances used in home repair and remodeling often make their way into the San Bernardino County storm drain system and do not get treated before reaching the Santa Ana River. This pollutes our drinking water and contaminates waterways, making them unsafe for people and wildlife. Follow these simple tips to prevent pollution and protect your health.



Construction Projects

Keep construction debris away from the street, gutter and storm drains. Schedule grading and excavation projects for dry weather. Cover excavated material and stockpiles of soil, sand or gravel, protected from rain, wind and runoff. Prevent erosion by planting fast-growing annual and perennial grass, which can shield and bind soil.

Recycle Household Hazardous Waste

Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

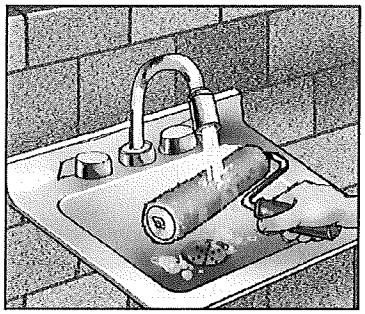


Landscaping & Gardening

Avoid applying fertilizers or pesticide near curbs and driveways, and store covered, protected from rain, wind and runoff. Try using organic or non-toxic alternatives. Reduce runoff and lower your water bill by using drip irrigation, soaker hoses or micro-spray systems. Recycle leaves instead of blowing, sweeping or raking them into the street, gutter or storm drain.

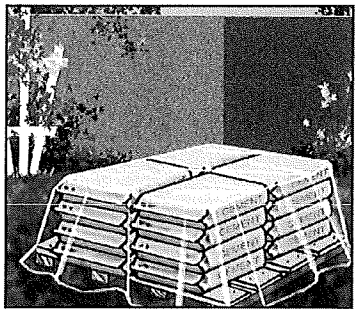
Paint Removal

Paint stripping residue, chips and dust from marine paints and paints containing lead or tributyl tin are hazardous wastes. Sweep them up instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility.



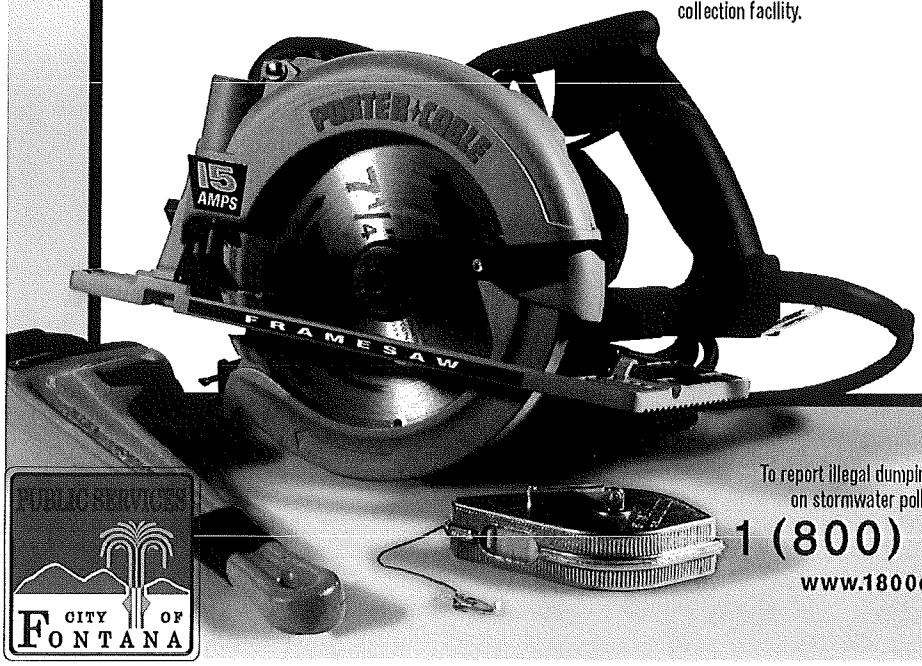
Painting Cleanup

Avoid cleaning brushes or rinsing paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which you can filter and reuse. Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, city or community organization.



Concrete and Masonry

Store bags of cement and plaster away from gutters and storm drains, and cover them to protect against rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.



To report illegal dumping or for more information on stormwater pollution prevention, call:

1 (800) CLEANUP

www.1800cleanup.org

PUBLIC SERVICES
CITY OF FONTANA

San Bernardino County STORMWATER PROGRAM

BMP Fact Sheets

FLEXSTORM® INLET FILTERS CATCH-IT®

ADS

FLEXSTORM® CATCH-IT® REUSABLE INLET PROTECTION



SPECIFY WITH CONFIDENCE

State DOTs and Municipalities across the country now have a universal structural BMP to address the issue of storm sewer inlet protection: FLEXSTORM CATCH-IT Inlet Filters–the temporary *and* reusable solution.

The FLEXSTORM CATCH-IT system is the preferred choice for temporary inlet protection and storm water runoff control. FLEXSTORM CATCH-IT Inlet Filters will fit any drainage structure and are equipped with high-efficiency filter bags. Whether you're the specifier or the user, it's clear to see how FLEXSTORM CATCH-IT Inlet Filters outperform the competition.

APPLICATIONS:

DOT	Road Construction
Commercial	Parking Lots
Industrial	Maintenance
Residential Developments	

FEATURES:

- **Configurable:** steel frames configured and guaranteed to fit ANY storm drainage structure
- **Adjustable:** although shipped to fit your inlet, rectangular framing may be field adjusted in 1/2" increments if necessary
- **Reusable:** galvanized framing will last year after year in harsh conditions, while geotextile filter bags are easily replaced after several years of use
- **Effective:** works below grade; overflow feature allows streets to drain with full bag; third party testing results of the FX filter bag show 82% Filtration Efficiency
- **Affordable:** low per-unit cost; installs in seconds; easily maintained with Universal Removal Tool (no machinery required)

BENEFITS:

- Reduce jobsite flooding and keep projects running
- Minimize residential complaints with cleaner, dryer streets during all construction phases
- Prevent hazardous road icing conditions by eliminating ponding at curb inlets
- Significantly reduce cleanup costs
- Prevent siltation and pollution of rivers, lakes, and ponds
- Helps prevent fines; NPDES PHASE II Compliant
- Lowest cost alternative for the highest level of Inlet Protection
- Available through 5,000 ADS distributors nationwide
- Ships within 48 hours



ADS Service:
ADS representatives are committed to providing you with the answers to all your questions, including selecting the proper filter, specifications, installation and more. Also try the ADS FLEXSTORM Online Product Configurator at www.inletfilters.com



*The Most **Advanced** Name in Drainage Systems®*

FLEXSTORM CATCH-IT INLET FILTERS SPECIFICATION

IDENTIFICATION

The installer shall inspect the plans and/or worksite to determine the quantity of each drainage structure casting type. The foundry casting number, exact grate size and clear opening size, or other information will be necessary to finalize the FLEXSTORM part number and dimensions. The units are shipped to the field configured precisely to fit the identified drainage structure.

MATERIAL AND PERFORMANCE

The FLEXSTORM Inlet Filter system is comprised of a corrosion resistant steel frame and a replaceable geotextile filter bag attached to the frame with a stainless steel locking band. The filter bag hangs suspended at a distance below the grate that shall allow full water flow into the drainage structure if the bag is completely filled with sediment. The standard Woven Polypropylene FX filter bags are rated for 200 gpm/sqft with a removal efficiency of 82% when filtering a USDA Sandy Loam sediment load. The Post Construction PC filter bags are rated for 137 gpm/sqft and have been 3rd party tested at 99% TSS removal to 110 micron and 97% TPH removal of used motor oil hydrocarbon mix.

INSTALLATION

Remove the grate from the casting or concrete drainage structure. Clean the ledge (lip) of the casting frame or drain- age structure to ensure it is free of stone and dirt. Drop in the FLEXSTORM Inlet Filter through the clear opening and be sure the suspension hangers rest firmly on the inside ledge (lip) of the casting. Replace the grate and confirm it is elevated no more than 1/8", which is the thickness of the steel hangers. For wall mount units, follow instructions for attaching the stainless steel mounting brackets using the provided concrete fasteners.

INSPECTION FREQUENCY

Construction site inspection should occur following each 1/2" or more rain event. Post Construction inspections should occur three times per year (every four months) in areas with mild year round rainfall and four times per year (every three months Feb-Nov) in areas with summer rains before and after the winter snowfall season. Industrial application site inspections (loading ramps, wash racks, maintenance facilities) should occur on a regularly scheduled basis no less than three times per year.

MAINTENANCE GUIDELINES

Empty the filter bag if more than half filled with sediment and debris, or as directed by the Engineer. Remove the grate, engage the lifting bars or handles with the FLEXSTORM Removal Tool, and lift from the drainage structure. Dispose of the sediment or debris as directed by the Engineer or Maintenance Contract in accordance with EPA guidelines.

As an alternative, an industrial vacuum may be used to collect the accumulated sediment. Remove any caked on silt from the sediment bag and reverse flush the bag with medium spray for optimal filtration. Replace the bag if torn or punctured to 1/2" diameter or greater on the lower half of the bag.

FILTER BAG REPLACEMENT

Remove the bag by loosening or cutting off the clamping band. Take the new filter bag, which is equipped with a stainless steel worm drive clamping band, and use a screw driver to tighten the bag around the frame channel. Ensure the bag is secure and that there is no slack around the perimeter of the band.

Lift Handles ease installation and maintenance



Replaceable Sediment Bag

1/8" thick steel hangers& channels; precision stampings **configured to fit each individual casting**



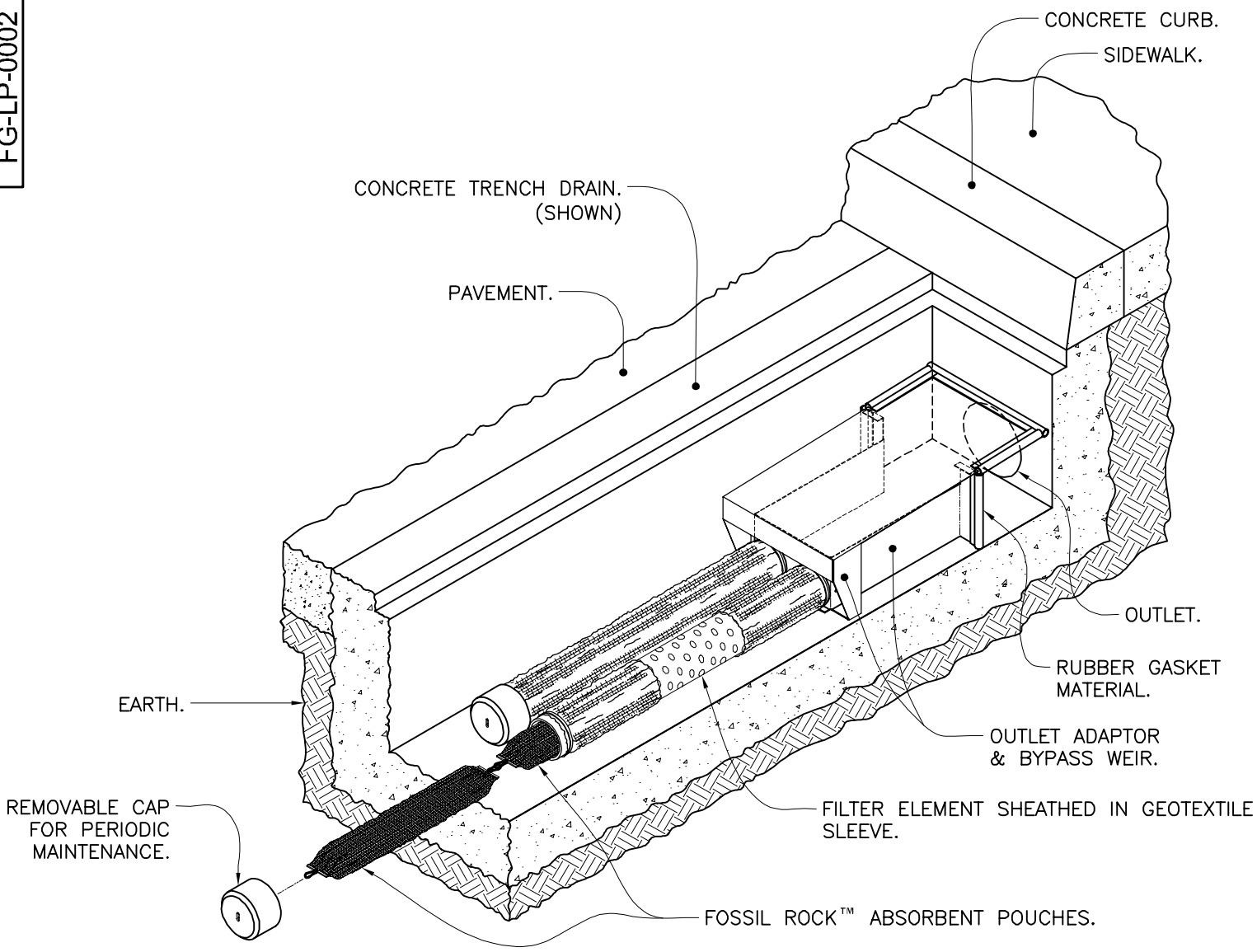
CAD drawings, work instructions and test reports on website: ***www.inletfilters.com***



For more information on FLEXSTORM Inlet Filters and other ADS products, please contact our Customer Service Representatives at 1-800-821-6710
Try the ADS FLEXSTORM Online Product Configurator at www.inletfilters.com.

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FG-LP-0002



NOTES:

1. Filter insert shall have a high flow bypass feature.
2. Filter outlet adapter shall be constructed from stainless steel Type 304.
   Alternate outlet adaptor for shallow installations shall be PVC SCH-40. See detail B, sheet 2 of 2.
3. Filter medium shall be *Fossil Rock* ™, installed and maintained in accordance with manufacturer specifications.
4. Storage capacity reflects 80% of maximum solids collection prior to impeding filtering bypass.
5. For alternate outlet adapter configurations used for extremely shallow trench drains contact Oldcastle Stormwater Solutions for engineering assistance.
6. Filter element should be a minimum of one half the length of trench. Confirm flow rate upon order.

Inlet Filtration

FloGard®

Catch Basin Insert Filter

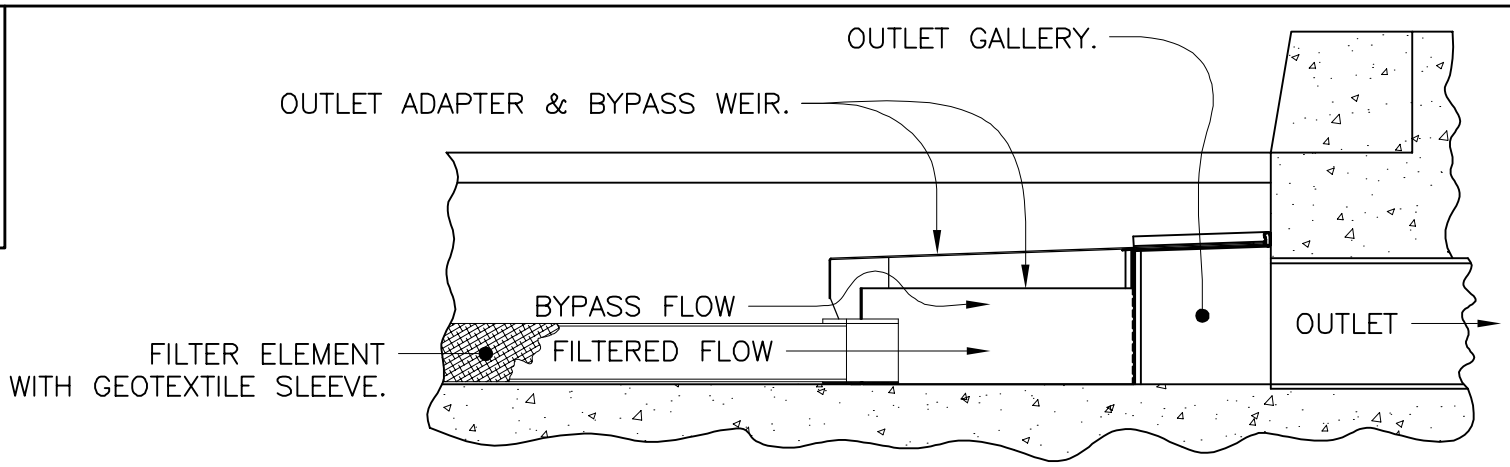
Trench Drain Style

Oldcastle® Stormwater Solutions
7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120 | Ph: 800.579.8819 | oldcastlestormwater.com

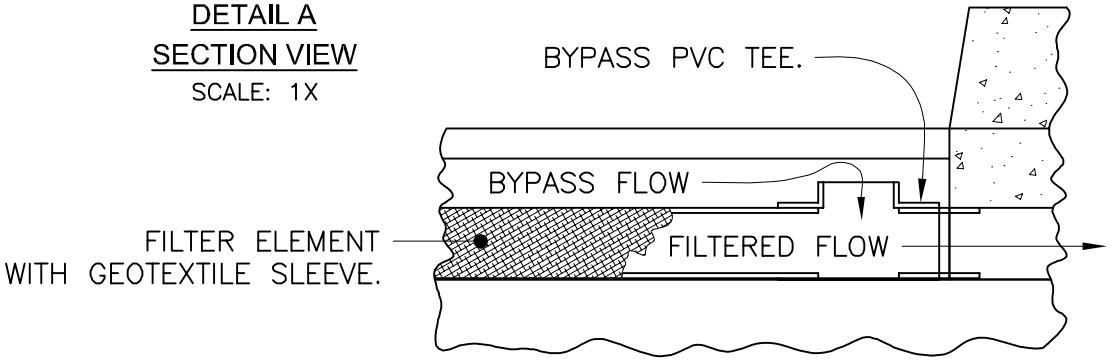
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DRAWING NO.	REV	ECO	DATE	
FG-LP-0002	H	ECO-0142 JPR 7/13/16	JPR 2/21/07	SHEET 1 OF 2

FG-LP-0002



DETAIL A
SECTION VIEW
SCALE: 1X



DETAIL B
SECTION VIEW
ALTERNATE ADAPTER CONFIGURATION
SCALE: 1X

SPECIFIER CHART

MODEL	FILTER TYPE	TRENCH WIDTH "ID" (CLEAR OPENING)	MINIMUM TRENCH DEPTH (FROM BOTTOM OF GRATE)	SOLIDS STORAGE CAPACITY CUBIC FEET **	FILTERED FLOW CUBIC FEET / SECOND **	TOTAL BYPASS CAPACITY CUBIC FEET /SECOND
FG-TDOF3	PIPE *	3.0	6.5	0.1	0.5	0.1
FG-TDOF4	PIPE *	4.0	6.5	0.2	0.5	0.1
FG-TDOF6	PIPE	6.0	6.5	0.4	0.5	0.2
FG-TDOF8	PIPE	8.0	6.5	0.7	0.5	0.3
FG-TDOF10	PIPE	10.0	6.5	0.9	0.5	0.5
FG-TDOF12	PIPE	12.0	6.5	0.9	1.0	0.6
FG-TDOF18	PIPE	18.0	6.5	1.3	1.5	1.1
FG-TDOF24	PIPE	24.0	6.5	1.8	2.0	1.5
FG-TDOA6	PANEL	6.0	4.5	0.4	0.2	0.2
FG-TDOA8	PANEL	8.0	4.5	0.7	0.2	0.3
FG-TDOA10	PANEL	10.0	4.5	0.8	0.3	0.5
FG-TDOA12	PANEL	12.0	4.5	1.0	0.4	0.6
FG-TDOA18	PANEL	18.0	4.5	1.4	0.8	1.1
FG-TDOA24	PANEL	24.0	4.5	1.8	1.1	1.5

* ALTERNATE ADAPTER CONFIGURATION. SEE DETAIL B.
**CAPACITY PER 5-FT. SEGMENT USED.

Inlet Filtration

FloGard®

Catch Basin Insert Filter

Trench Drain Style

Oldcastle® Stormwater Solutions

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Infiltration Basin TC-11



Design Considerations

- Soil for Infiltration
- Slope
- Aesthetics

Targeted Constituents

☑	Sediment	■
☑	Nutrients	■
☑	Trash	■
☑	Metals	■
☑	Bacteria	■
☑	Oil and Grease	■
☑	Organics	■

Legend ***(Removal Effectiveness)***

● Low ■ High

▲ Medium

Description

An infiltration basin is a shallow impoundment that is designed to infiltrate stormwater. Infiltration basins use the natural filtering ability of the soil to remove pollutants in stormwater runoff. Infiltration facilities store runoff until it gradually exfiltrates through the soil and eventually into the water table. This practice has high pollutant removal efficiency and can also help recharge groundwater, thus helping to maintain low flows in stream systems. Infiltration basins can be challenging to apply on many sites, however, because of soils requirements. In addition, some studies have shown relatively high failure rates compared with other management practices.

California Experience

Infiltration basins have a long history of use in California, especially in the Central Valley. Basins located in Fresno were among those initially evaluated in the National Urban Runoff Program and were found to be effective at reducing the volume of runoff, while posing little long-term threat to groundwater quality (EPA, 1983; Schroeder, 1995). Proper siting of these devices is crucial as underscored by the experience of Caltrans in siting two basins in Southern California. The basin with marginal separation from groundwater and soil permeability failed immediately and could never be rehabilitated.

Advantages

- Provides 100% reduction in the load discharged to surface waters.
- The principal benefit of infiltration basins is the approximation of pre-development hydrology during which a

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significant portion of the average annual rainfall runoff is infiltrated and evaporated rather than flushed directly to creeks.

- If the water quality volume is adequately sized, infiltration basins can be useful for providing control of channel forming (erosion) and high frequency (generally less than the 2-year) flood events.

Limitations

- May not be appropriate for industrial sites or locations where spills may occur.
- Infiltration basins require a minimum soil infiltration rate of 0.5 inches/hour, not appropriate at sites with Hydrologic Soil Types C and D.
- If infiltration rates exceed 2.4 inches/hour, then the runoff should be fully treated prior to infiltration to protect groundwater quality.
- Not suitable on fill sites or steep slopes.
- Risk of groundwater contamination in very coarse soils.
- Upstream drainage area must be completely stabilized before construction.
- Difficult to restore functioning of infiltration basins once clogged.

Design and Sizing Guidelines

- Water quality volume determined by local requirements or sized so that 85% of the annual runoff volume is captured.
- Basin sized so that the entire water quality volume is infiltrated within 48 hours.
- Vegetation establishment on the basin floor may help reduce the clogging rate.

Construction/Inspection Considerations

- Before construction begins, stabilize the entire area draining to the facility. If impossible, place a diversion berm around the perimeter of the infiltration site to prevent sediment entrance during construction or remove the top 2 inches of soil after the site is stabililized. Stabilize the entire contributing drainage area, including the side slopes, before allowing any runoff to enter once construction is complete.
- Place excavated material such that it can not be washed back into the basin if a storm occurs during construction of the facility.
- Build the basin without driving heavy equipment over the infiltration surface. Any equipment driven on the surface should have extra-wide ("low pressure") tires. Prior to any construction, rope off the infiltration area to stop entrance by unwanted equipment.
- After final grading, till the infiltration surface deeply.
- Use appropriate erosion control seed mix for the specific project and location.

Performance

As water migrates through porous soil and rock, pollutant attenuation mechanisms include precipitation, sorption, physical filtration, and bacterial degradation. If functioning properly, this approach is presumed to have high removal efficiencies for particulate pollutants and moderate removal of soluble pollutants. Actual pollutant removal in the subsurface would be expected to vary depending upon site-specific soil types. This technology eliminates discharge to surface waters except for the very largest storms; consequently, complete removal of all stormwater constituents can be assumed.

There remain some concerns about the potential for groundwater contamination despite the findings of the NURP and Nightingale (1975; 1987a,b,c; 1989). For instance, a report by Pitt et al. (1994) highlighted the potential for groundwater contamination from intentional and unintentional stormwater infiltration. That report recommends that infiltration facilities not be sited in areas where high concentrations are present or where there is a potential for spills of toxic material. Conversely, Schroeder (1995) reported that there was no evidence of groundwater impacts from an infiltration basin serving a large industrial catchment in Fresno, CA.

Siting Criteria

The key element in siting infiltration basins is identifying sites with appropriate soil and hydrogeologic properties, which is critical for long term performance. In one study conducted in Prince George's County, Maryland (Galli, 1992), all of the infiltration basins investigated clogged within 2 years. It is believed that these failures were for the most part due to allowing infiltration at sites with rates of less than 0.5 in/hr, basing siting on soil type rather than field infiltration tests, and poor construction practices that resulted in soil compaction of the basin invert.

A study of 23 infiltration basins in the Pacific Northwest showed better long-term performance in an area with highly permeable soils (Hilding, 1996). In this study, few of the infiltration basins had failed after 10 years. Consequently, the following guidelines for identifying appropriate soil and subsurface conditions should be rigorously adhered to.

- Determine soil type (consider RCS soil type 'A, B or C' only) from mapping and consult USDA soil survey tables to review other parameters such as the amount of silt and clay, presence of a restrictive layer or seasonal high water table, and estimated permeability. The soil should not have more than 30% clay or more than 40% of clay and silt combined. Eliminate sites that are clearly unsuitable for infiltration.

- Groundwater separation should be at least 3 m from the basin invert to the measured ground water elevation. There is concern at the state and regional levels of the impact on groundwater quality from infiltrated runoff, especially when the separation between groundwater and the surface is small.

- Location away from buildings, slopes and highway pavement (greater than 6 m) and wells and bridge structures (greater than 30 m). Sites constructed of fill, having a base flow or with a slope greater than 15% should not be considered.

- Ensure that adequate head is available to operate flow splitter structures (to allow the basin to be offline) without ponding in the splitter structure or creating backwater upstream of the splitter.

- Base flow should not be present in the tributary watershed.

Secondary Screening Based on Site Geotechnical Investigation

- At least three in-hole conductivity tests shall be performed using USBR 7300-89 or Bouwer-Rice procedures (the latter if groundwater is encountered within the boring), two tests at different locations within the proposed basin and the third down gradient by no more than approximately 10 m. The tests shall measure permeability in the side slopes and the bed within a depth of 3 m of the invert.

- The minimum acceptable hydraulic conductivity as measured in any of the three required test holes is 13 mm/hr. If any test hole shows less than the minimum value, the site should be disqualified from further consideration.

- Exclude from consideration sites constructed in fill or partially in fill unless no silts or clays are present in the soil boring. Fill tends to be compacted, with clays in a dispersed rather than flocculated state, greatly reducing permeability.

- The geotechnical investigation should be such that a good understanding is gained as to how the stormwater runoff will move in the soil (horizontally or vertically) and if there are any geological conditions that could inhibit the movement of water.

Additional Design Guidelines

(1) Basin Sizing - The required water quality volume is determined by local regulations or sufficient to capture 85% of the annual runoff.

(2) Provide pretreatment if sediment loading is a maintenance concern for the basin.

(3) Include energy dissipation in the inlet design for the basins. Avoid designs that include a permanent pool to reduce opportunity for standing water and associated vector problems.

(4) Basin invert area should be determined by the equation:

$$A = \frac{WQV}{kt}$$

where A = Basin invert area (m^2)

WQV = water quality volume (m^3)

k = 0.5 times the lowest field-measured hydraulic conductivity (m/hr)

t = drawdown time (48 hr)

(5) The use of vertical piping, either for distribution or infiltration enhancement shall not be allowed to avoid device classification as a Class V injection well per 40 CFR146.5(e)(4).

Maintenance

Regular maintenance is critical to the successful operation of infiltration basins. Recommended operation and maintenance guidelines include:

- Inspections and maintenance to ensure that water infiltrates into the subsurface completely (recommended infiltration rate of 72 hours or less) and that vegetation is carefully managed to prevent creating mosquito and other vector habitats.
- Observe drain time for the design storm after completion or modification of the facility to confirm that the desired drain time has been obtained.
- Schedule semiannual inspections for beginning and end of the wet season to identify potential problems such as erosion of the basin side slopes and invert, standing water, trash and debris, and sediment accumulation.
- Remove accumulated trash and debris in the basin at the start and end of the wet season.
- Inspect for standing water at the end of the wet season.
- Trim vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons.
- Remove accumulated sediment and regrade when the accumulated sediment volume exceeds 10% of the basin.
- If erosion is occurring within the basin, revegetate immediately and stabilize with an erosion control mulch or mat until vegetation cover is established.
- To avoid reversing soil development, scarification or other disturbance should only be performed when there are actual signs of clogging, rather than on a routine basis. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller, if possible, or a disc harrow pulled by a very light tractor.

Cost

Infiltration basins are relatively cost-effective practices because little infrastructure is needed when constructing them. One study estimated the total construction cost at about $2 per ft (adjusted for inflation) of storage for a 0.25-acre basin (SWRPC, 1991). As with other BMPs, these published cost estimates may deviate greatly from what might be incurred at a specific site. For instance, Caltrans spent about $18/ft^3 for the two infiltration basins constructed in southern California, each of which had a water quality volume of about 0.34 ac.-ft. Much of the higher cost can be attributed to changes in the storm drain system necessary to route the runoff to the basin locations.

Infiltration basins typically consume about 2 to 3% of the site draining to them, which is relatively small. Additional space may be required for buffer, landscaping, access road, and fencing. Maintenance costs are estimated at 5 to 10% of construction costs.

One cost concern associated with infiltration practices is the maintenance burden and longevity. If improperly maintained, infiltration basins have a high failure rate. Thus, it may be necessary to replace the basin with a different technology after a relatively short period of time.

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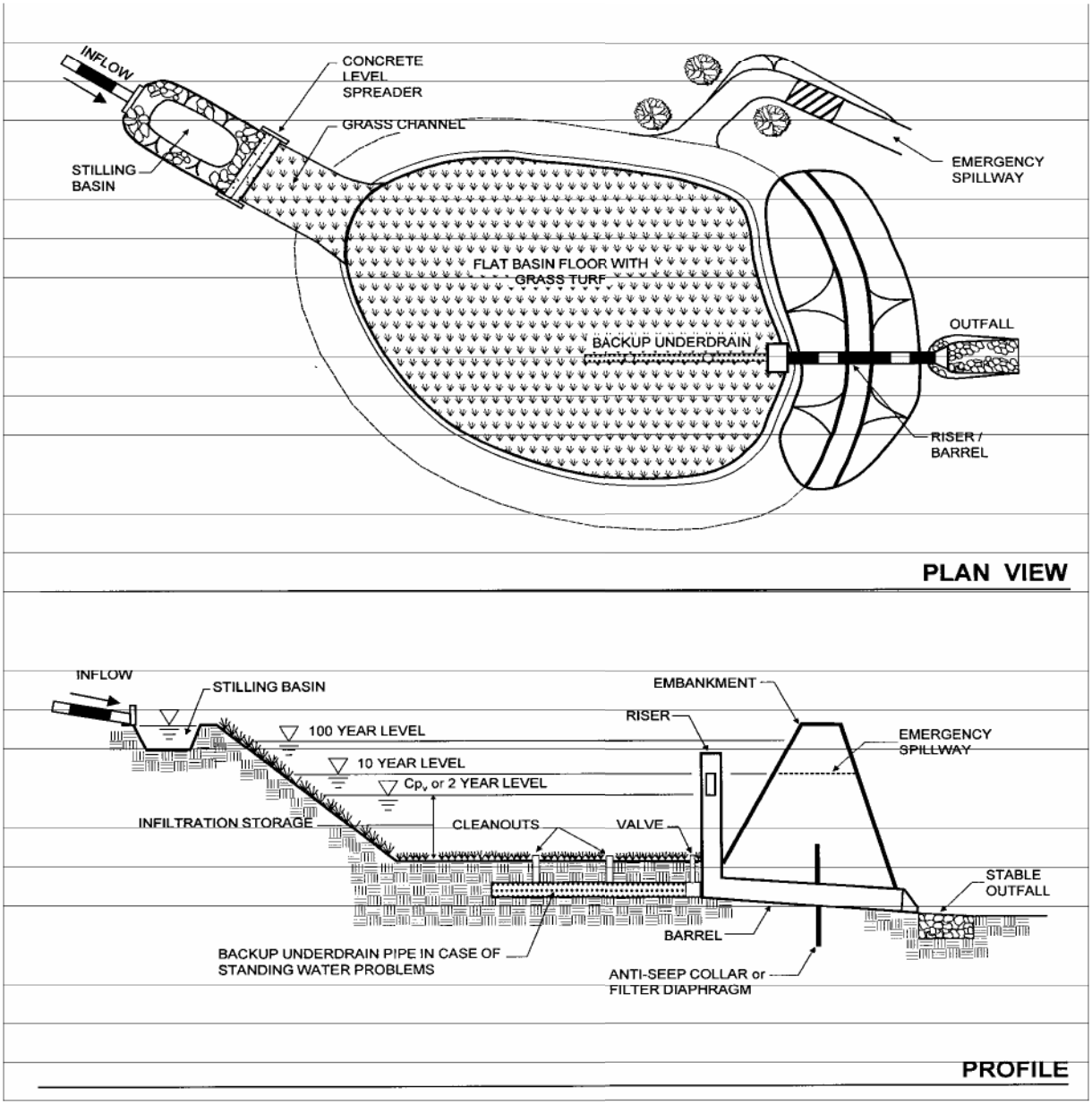
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INFLOW
CONCRETE LEVEL SPREADER
GRASS CHANNEL
STILLING BASIN
EMERGENCY SPILLWAY
FLAT BASIN FLOOR WITH GRASS TURF
OUTFALL
BACKUP UNDERDRAIN
RISER / BARREL
PLAN VIEW
INFLOW
STILLING BASIN
EMBANKMENT
RISER
100 YEAR LEVEL
EMERGENCY SPILLWAY
10 YEAR LEVEL
Cp_v or 2 YEAR LEVEL
INFILTRATION STORAGE
CLEANOUTS
VALVE
STABLE OUTFALL
BARREL
BACKUP UNDERDRAIN PIPE IN CASE OF STANDING WATER PROBLEMS
ANTI-SEEP COLLAR or FILTER DIAPHRAGM
PROFILE

Site Design & Landscape Planning SD-10



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

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Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Roof Runoff Controls SD-11



Rain Garden

Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Description

Various roof runoff controls are available to address stormwater that drains off rooftops. The objective is to reduce the total volume and rate of runoff from individual lots, and retain the pollutants on site that may be picked up from roofing materials and atmospheric deposition. Roof runoff controls consist of directing the roof runoff away from paved areas and mitigating flow to the storm drain system through one of several general approaches: cisterns or rain barrels; dry wells or infiltration trenches; pop-up emitters, and foundation planting. The first three approaches require the roof runoff to be contained in a gutter and downspout system. Foundation planting provides a vegetated strip under the drip line of the roof.

Approach

Design of individual lots for single-family homes as well as lots for higher density residential and commercial structures should consider site design provisions for containing and infiltrating roof runoff or directing roof runoff to vegetative swales or buffer areas. Retained water can be reused for watering gardens, lawns, and trees. Benefits to the environment include reduced demand for potable water used for irrigation, improved stormwater quality, increased groundwater recharge, decreased runoff volume and peak flows, and decreased flooding potential.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Designing New Installations

Cisterns or Rain Barrels

One method of addressing roof runoff is to direct roof downspouts to cisterns or rain barrels. A cistern is an above ground storage vessel with either a manually operated valve or a permanently open outlet. Roof runoff is temporarily stored and then released for irrigation or infiltration between storms. The number of rain

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barrels needed is a function of the rooftop area. Some low impact developers recommend that every house have at least 2 rain barrels, with a minimum storage capacity of 1000 liters. Roof barrels serve several purposes including mitigating the first flush from the roof which has a high volume, amount of contaminants, and thermal load. Several types of rain barrels are commercially available. Consideration must be given to selecting rain barrels that are vector proof and childproof. In addition, some barrels are designed with a bypass valve that filters out grit and other contaminants and routes overflow to a soak-away pit or rain garden.

If the cistern has an operable valve, the valve can be closed to store stormwater for irrigation or infiltration between storms. This system requires continual monitoring by the resident or grounds crews, but provides greater flexibility in water storage and metering. If a cistern is provided with an operable valve and water is stored inside for long periods, the cistern must be covered to prevent mosquitoes from breeding.

A cistern system with a permanently open outlet can also provide for metering stormwater runoff. If the cistern outlet is significantly smaller than the size of the downspout inlet (say ¼ to ½ inch diameter), runoff will build up inside the cistern during storms, and will empty out slowly after peak intensities subside. This is a feasible way to mitigate the peak flow increases caused by rooftop impervious land coverage, especially for the frequent, small storms.

Dry wells and Infiltration Trenches

Roof downspouts can be directed to dry wells or infiltration trenches. A dry well is constructed by excavating a hole in the ground and filling it with an open graded aggregate, and allowing the water to fill the dry well and infiltrate after the storm event. An underground connection from the downspout conveys water into the dry well, allowing it to be stored in the voids. To minimize sedimentation from lateral soil movement, the sides and top of the stone storage matrix can be wrapped in a permeable filter fabric, though the bottom may remain open. A perforated observation pipe can be inserted vertically into the dry well to allow for inspection and maintenance.

In practice, dry wells receiving runoff from single roof downspouts have been successful over long periods because they contain very little sediment. They must be sized according to the amount of rooftop runoff received, but are typically 4 to 5 feet square, and 2 to 3 feet deep, with a minimum of 1-foot soil cover over the top (maximum depth of 10 feet).

To protect the foundation, dry wells must be set away from the building at least 10 feet. They must be installed in solids that accommodate infiltration. In poorly drained soils, dry wells have very limited feasibility.

Infiltration trenches function in a similar manner and would be particularly effective for larger roof areas. An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. These are described under Treatment Controls.

Pop-up Drainage Emitter

Roof downspouts can be directed to an underground pipe that daylights some distance from the building foundation, releasing the roof runoff through a pop-up emitter. Similar to a pop-up irrigation head, the emitter only opens when there is flow from the roof. The emitter remains flush to the ground during dry periods, for ease of lawn or landscape maintenance.

Foundation Planting

Landscape planting can be provided around the base to allow increased opportunities for stormwater infiltration and protect the soil from erosion caused by concentrated sheet flow coming off the roof. Foundation plantings can reduce the physical impact of water on the soil and provide a subsurface matrix of roots that encourage infiltration. These plantings must be sturdy enough to tolerate the heavy runoff sheet flows, and periodic soil saturation.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Supplemental Information

Examples

- City of Ottawa's Water Links Surface –Water Quality Protection Program
- City of Toronto Downspout Disconnection Program
- City of Boston, MA, Rain Barrel Demonstration Program

Other Resources

Hager, Marty Catherine, Stormwater, "Low-Impact Development", January/February 2003. www.stormh2o.com

Low Impact Urban Design Tools, Low Impact Development Design Center, Beltsville, MD. www.lid-stormwater.net

Start at the Source, Bay Area Stormwater Management Agencies Association, 1999 Edition

Efficient Irrigation SD-12



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Vehicle Washing Areas SD-33



Photo Credit: Geoff Brosseau

Design Objectives

- ☑ Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- ☑ Collect and Convey

Description

Vehicle washing, equipment washing, and steam cleaning may contribute high concentrations of metals, oil and grease, solvents, phosphates, and suspended solids to wash waters that drain to stormwater conveyance systems.

Approach

Project plans should include appropriately designed area(s) for washing-steam cleaning of vehicles and equipment. Depending on the size and other parameters of the wastewater facility, wash water may be conveyed to a sewer, an infiltration system, recycling system or other alternative. Pretreatment may be required for conveyance to a sanitary sewer.

Suitable Applications

Appropriate applications include commercial developments, restaurants, retail gasoline outlets, automotive repair shops and others.

Design Considerations

Design requirements for vehicle maintenance are governed by Building and Fire Codes, and by current local agency ordinances, and zoning requirements. Design criteria described in this fact sheet are meant to enhance and be consistent with these code requirements.

Designing New Installations

Areas for washing/steam cleaning should incorporate one of the following features:

- Be self-contained and/or covered with a roof or overhang
- Be equipped with a clarifier or other pretreatment facility
- Have a proper connection to a sanitary sewer

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- Include other features which are comparable and equally effective

CAR WASH AREAS - Some jurisdictions' stormwater management plans include vehicle-cleaning area source control design requirements for community car wash racks in complexes with a large number of dwelling units. In these cases, wash water from the areas may be directed to the sanitary sewer, to an engineered infiltration system, or to an equally effective alternative. Pre-treatment may also be required.

Depending on the jurisdiction, developers may be directed to divert surface water runoff away from the exposed area around the wash pad (parking lot, storage areas), and wash pad itself to alternatives other than the sanitary sewer. Roofing may be required for exposed wash pads.

It is generally advisable to cover areas used for regular washing of vehicles, trucks, or equipment, surround them with a perimeter berm, and clearly mark them as a designated washing area. Sumps or drain lines can be installed to collect wash water, which may be treated for reuse or recycling, or for discharge to the sanitary sewer. Jurisdictions may require some form of pretreatment, such as a trap, for these areas.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment.

Additional Information

Maintenance Considerations

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permit.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Outdoor Material Storage Areas SD-34



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutant
- Collect and Convey

Description

Proper design of outdoor storage areas for materials reduces opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the stormwater conveyance system. Materials may be in the form of raw products, by-products, finished products, and waste products. The type of pollutants associated with the materials will vary depending on the type of commercial or industrial activity.

Approach

Outdoor storage areas require a drainage approach different from the typical infiltration/detention strategy. In outdoor storage areas, infiltration is discouraged. Containment is encouraged. Preventative measures include enclosures, secondary containment structures and impervious surfaces.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Some materials are more of a concern than others. Toxic and hazardous materials must be prevented from coming in contact with stormwater. Non-toxic or non-hazardous materials do not have to be prevented from stormwater contact. However, these materials may have toxic effects on receiving waters if allowed to be discharged with stormwater in significant quantities. Accumulated material on an impervious surface could result in significant impact on the rivers or streams that receive the runoff.

Material may be stored in a variety of ways, including bulk piles, containers, shelving, stacking, and tanks. Stormwater contamination may be prevented by eliminating the possibility of stormwater contact with the material storage areas either through diversion, cover, or capture of the stormwater. Control measures may also include minimizing the storage area. Design

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requirements for material storage areas are governed by Building and Fire Codes, and by current City or County ordinances and zoning requirements. Control measures are site specific, and must meet local agency requirements.

Designing New Installations

Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system, the following structural or treatment BMPS should be considered:

- Materials with the potential to contaminate stormwater should be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the stormwater conveyance system, or (2) protected by secondary containment structures such as berms, dikes, or curbs.
- The storage area should be paved and sufficiently impervious to contain leaks and spills.
- The storage area should slope towards a dead-end sump to contain spills and direct runoff from downspouts/roofs should be directed away from storage areas.
- The storage area should have a roof or awning that extends beyond the storage area to minimize collection of stormwater within the secondary containment area. A manufactured storage shed may be used for small containers.

Note that the location(s) of installations of where these preventative measures will be employed must be included on the map or plans identifying BMPs.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permits.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Appendix-A

Infiltration Test Report

San Bernardino County Southwestern Part, California

SpC—Soboba stony loamy sand, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hckv
Elevation: 960 to 3,690 feet
Mean annual precipitation: 12 to 39 inches
Mean annual air temperature: 60 to 65 degrees F
Frost-free period: 260 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Soboba and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Soboba

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

Ap - 0 to 10 inches: stony loamy sand
C1 - 10 to 24 inches: very stony loamy sand
C2 - 24 to 60 inches: very stony sand

Properties and qualities

Slope: 2 to 9 percent
Percent of area covered with surface fragments: 0.1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 19.99 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.0 mmhos/cm)
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Hanford

Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Tujunga, gravelly loamy sand

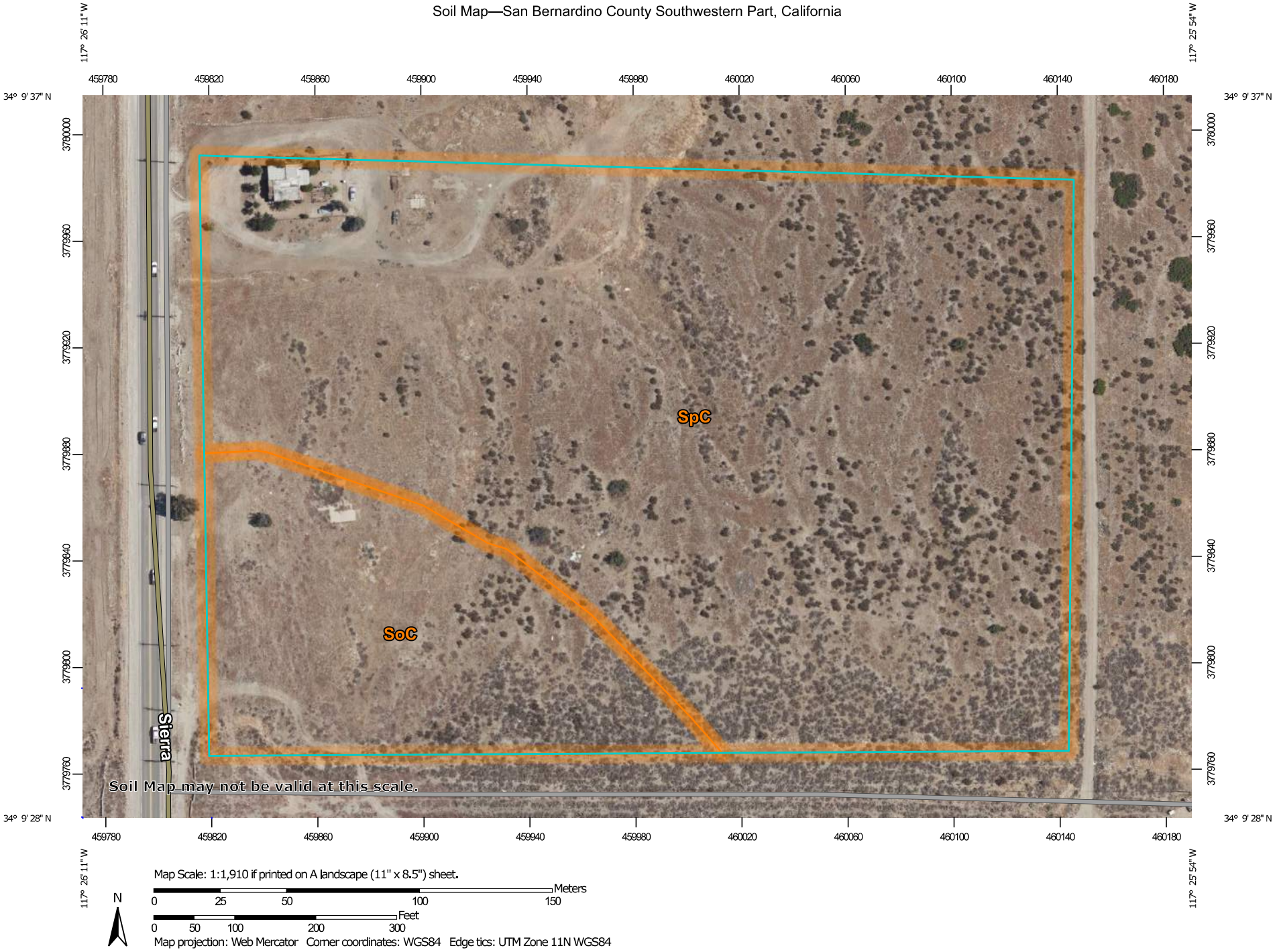
Percent of map unit: 5 percent
Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ramona

Percent of map unit: 5 percent
Landform: Fan remnants
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 10, Sep 12, 2018



Map Scale: 1:1,910 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 10, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2018—Jun 30, 2018

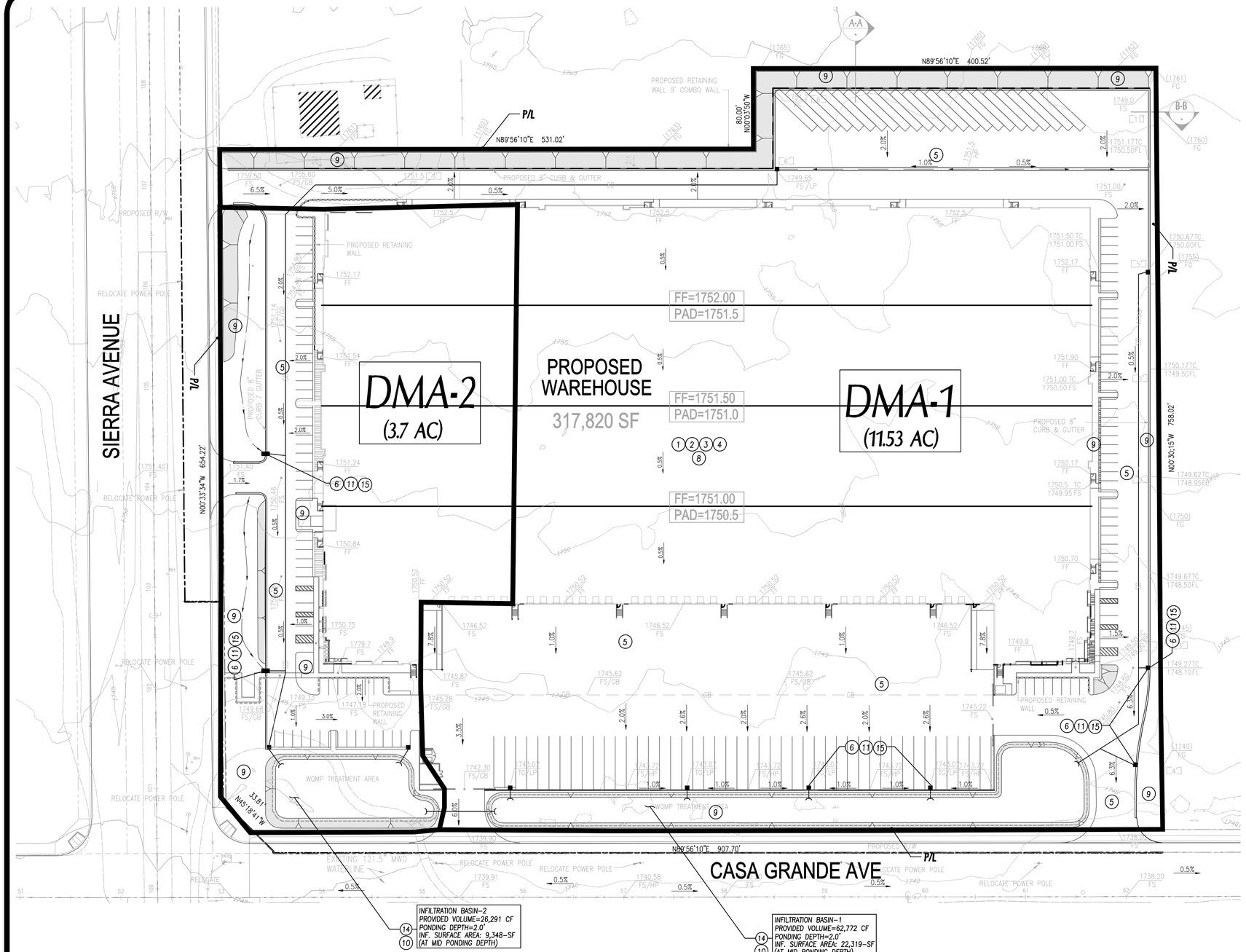
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
SoC	Soboba gravelly loamy sand, 0 to 9 percent slopes	3.7	20.5%
SpC	Soboba stony loamy sand, 2 to 9 percent slopes	14.2	79.5%
Totals for Area of Interest		**17.9**	**100.0%**

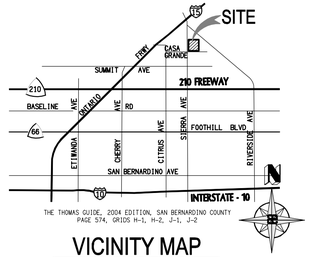
Site Plan

WQMP Exhibit



BMP LIST:

1. EDUCATION OF PROPERTY OWNERS
2. ACTIVITY RESTRICTIONS
3. SPILL CONTINGENCY
4. TRAINING/EDUCATION PROGRAM
5. PARKING LOT SWEEPING/VACUUMING
6. COMMON AREA CATCH BASIN INSPECTION
7. LANDSCAPE PLANNING (SD-10)
8. ROOF RUNOFF CONTROLS (SD-11)
9. EFFICIENT IRRIGAION (SD-12)
10. STORM DRAIN SIGNAGE (SD-13)
11. INLET TRASH RACK
12. NOT USED.
13. TRASH STORAGE AREAS (SD-32)
14. INFILTRATION BASIN-1 & 2 (TC-11)
15. CATCH BASIN FILTER INSERT-ADS FLEXSTORM CATCH IT OR APPROVED EQUAL
16. TRAFFIC GRATE FILTER INSERT-OLDCASTLE FLOGARD INSERT FILTER OR APPROVED EQUAL



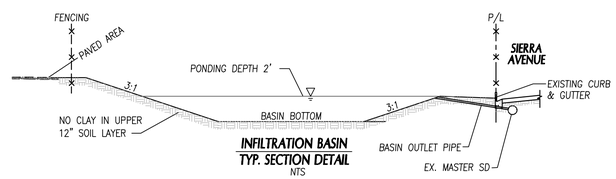
THE THOMAS GUIDE, 2004 EDITION, SAN BERNARDINO COUNTY
PAGE 574, GRIDS H-1, H-2, J-1, J-2

VICINITY MAP
N.T.S.

BMP STATISTICS:

DMAs	AREA (AC)	BMP	BMP CAPACITY (CF)	REQUIRED VOLUME (CF)	PROVIDED VOLUME (CF)
DMA-1	11.53	INFILTRATION BASIN #1	62,772	67,040	62,772
DMA-2	3.70	INFILTRATION BASIN #2	26,291	16,655	26,291
TOTAL DRAINAGE AREA: 15.23 AC		TOTAL		83,695	89,063

DCV ACHEIVED WITH PROPOSED BMPs: 106.4%



INFILTRATION BASIN TYP. SECTION DETAIL
NTS

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

LENGTH OF PARKWAY FRONTAGE IMPROVEMENT = 1,675-FT
FRONTAGE IMPROVEMENTS INCLUDE SIDEWALK AND CURB & GUTTER IMPROVEMENTS. ACCORDING TO THE COUNTY OF SAN BERNARDINO TRANSPORTATION TOTAL GUIDANCE DOCUMENT (TGD) CRITERIA, PROJECTS WITH LESS THAN 1/2 MILE (2,640-FT) OF STREET FRONTAGE IMPROVEMENTS ARE EXEMPT FROM TREATMENT.

LATITUDE & LONGITUDE
34.15901 N, 117.43418 W

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CITY OF FONTANA
CALIFORNIA

WQMP EXHIBIT
SIERRA AVE / CASA GRANDE WAREHOUSE

PLOT DATE: September 27, 2019 steuer1

Filename: I:\DW Development\Sierra Avenue\Drowings\ENTITLEMENT\EXHIBITS\DW DEV WQMP EXHIBIT SIERRA CONCEPT GRA

Appendix G

Acoustical Assessment;

Noise Memorandum - Mango Ave Replacement Site; and

Noise Memorandum - Palmetto Ave Replacement Site

Acoustical Assessment
Sierra Avenue and Casa Grande Warehouse Project
City of Fontana, California

Prepared by:

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June 2020

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Appendix A: Noise Data

LIST OF ABBREVIATED TERMS

APN	Assessor's Parcel Number
ADT	average daily traffic
dBA	A-weighted sound level
CEQA	California Environmental Quality Act
CLSP	California Landings Specific Plan
CSMA	California Subdivision Map Act
CNEL	community equivalent noise level
L_{dn}	day-night noise level
dB	decibel
du/ac	dwelling units per acre
L_{eq}	equivalent noise level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	heating ventilation and air conditioning
Hz	hertz
HOA	homeowner's association
in/sec	inches per second
L_{max}	maximum noise level
µPa	micropascals
L_{min}	minimum noise level
PPV	peak particle velocity
RMS	root mean square
VdB	vibration velocity level

1 INTRODUCTION

This report documents the results of an Acoustical Assessment completed for the Sierra Avenue and Casa Grande Warehouse Project ("Project" or "Proposed Project"). The purpose of this Acoustical Assessment is to evaluate the potential construction and operational noise and vibration levels associated with the Project and determine the level of impact the Project would have on the environment.

1.1 Project Location and Setting

The propose warehouse site is located in the northeastern portion of the City of Fontana (City); approximately 330 feet west of the City border as shown in Exhibit 1: *Regional Vicinity*. The warehouse site consists of three connected parcels on the northeast corner of the Sierra Avenue and Casa Grande Drive intersection; refer to Exhibit 2: *Local Vicinity*. Regional access would be available to the site via transportation routes including State Route 210 and Interstate Highway I-15. The State Route 210 entrance and exit is located approximately 1.5 miles south of the proposed Project via Sierra Avenue. The Interstate Highway I-15 entrance and exit is located approximately 1.6 miles north of the proposed Project via Sierra Avenue.

The warehouse site is a rectangular lot, mostly vacant, and unimproved site on approximately 16.5-gross acres (15.34-net acres) or approximately 661,561-square feet; refer to Exhibit 2**.** The northwest corner of the property is occupied by a single-family residence, while the remaining portion of the property is undeveloped land covered with natural vegetation, including two trees on the west side of the site. A concrete foundation from a former house remains on the site. Additionally, there is debris consisting of mostly rocks, dirt, tires, and an old domestic sprinkler hose. The property is zoned R-5 and R-MU for single-family residential and regional-mixed use commercial development by the City of Fontana, respectively.

1.2 Project Description

The proposed Project involves the development of a 332,996-square feet distribution warehouse building within the approximate 16.5-gross acre (15.34-net acre) warehouse site. The warehouse would have associated facilities and improvements such as a guard booth, mezzanine (5,000-square feet), vehicle parking, loading dock doors, trailer parking, onsite and off-site landscaping, and onsite and off-site improvements; Refer to Exhibit 3**:** *Conceptual Site Plan*.

Landscaping

Onsite landscaping would be provided on the Project site. Approximately twenty-five to sixty-foot-wide landscaped buffers would be provided along the south and west boundaries and a thirty-foot-wide buffer along the northern boundary.

Project Circulation

Regional Project access would be from Interstate 215 (I-215) and State Route 210 (SR-210) via the officially designated local truck route[1] Sierra Avenue. Local access would be provided via Casa Grande Drive. Project site ingress and egress would be via four driveways; two approximately thirty-foot driveways on Sierra Avenue and two approximately forty-foot driveways on Casa Grande Drive.

Parking

The Project would provide 134 parking stalls, 67 trailers stalls, and 35 dock doors.

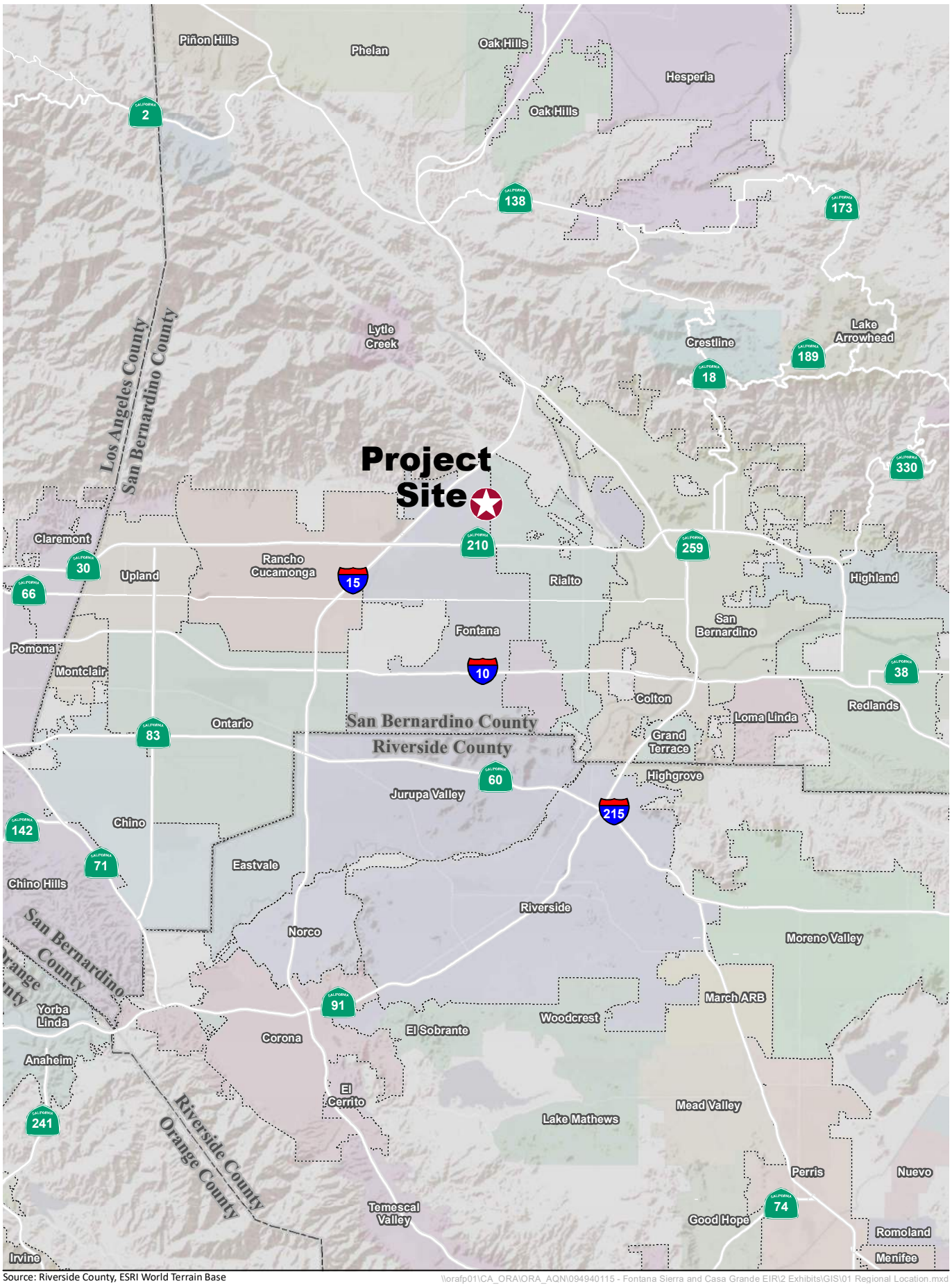
Project Phasing and Construction

The Project is anticipated to be developed in one phase. Should the Project be approved, construction is anticipated to occur over a duration of approximately 15 months, commencing in the second half of 2020; the facility would be operational in late 2021.

Offsite Improvements

The Project will be responsible for approximately eighteen feet beyond the property line on Casa Grande Drive. Additionally, the Project would improve Sierra Avenue and Casa Grande Drive with approved curb, gutter, and lighting.

[1] City of Fontana, *Local Truck Route – Ordinance No. 1273*, https://www.fontana.org/DocumentCenter/View/3971/Local-Truck-Routes-2017-11x17?bidId=, accessed March 11, 2020.



Source: Riverside County, ESRI World Terrain Base

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\01 Regional Location.mxd

EXHIBIT 1: Regional Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 2.5 5

Miles

Kimley»Horn



Source: ESRI World Imagery

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\02 Site Vicinity.mxd

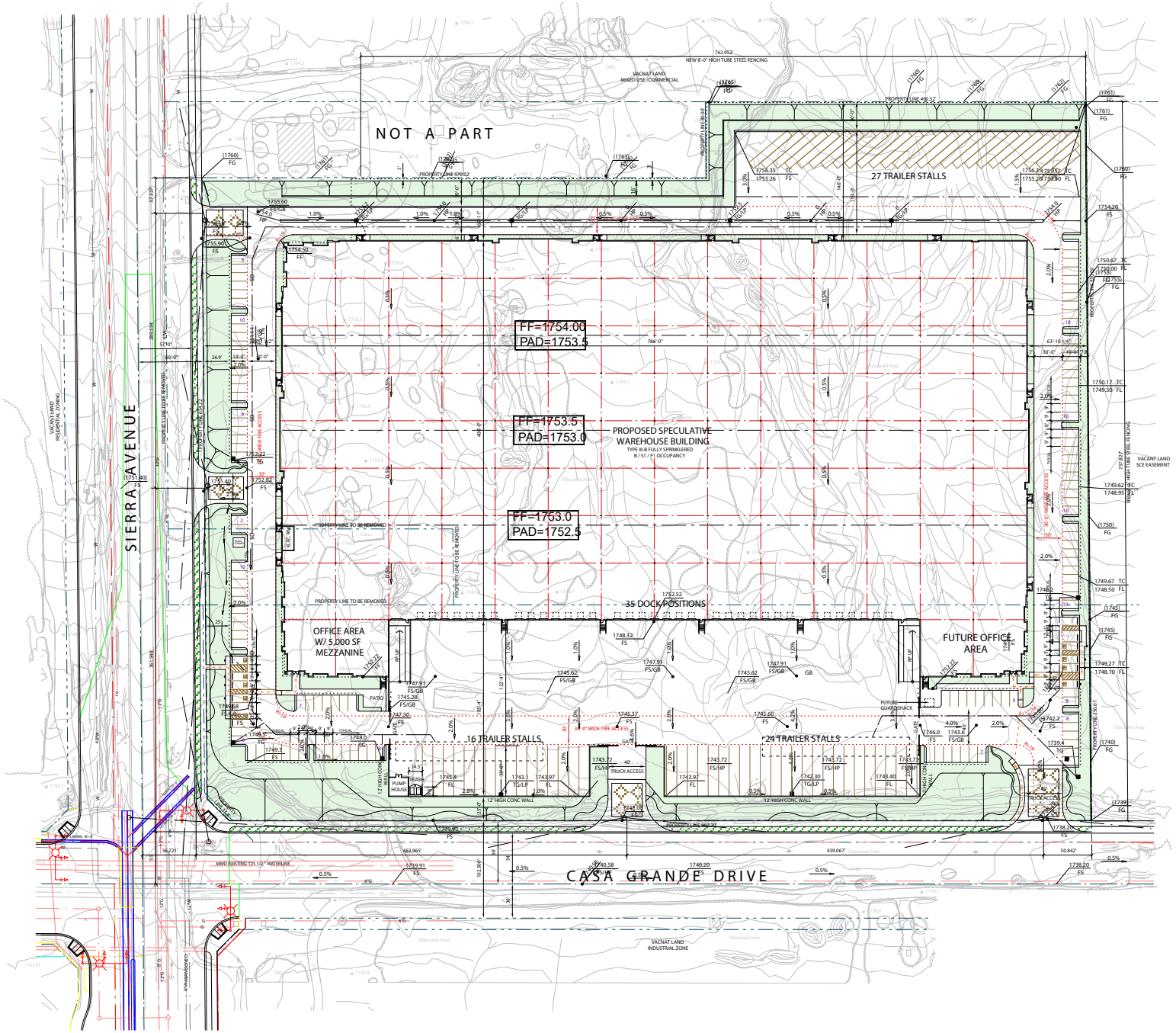
EXHIBIT 2: Site Vicinity

Sierra Avenue and Casa Grande Warehouse Project

0 250 500

Feet

Kimley»Horn



Source: RGA Office of Architectural Design

EXHIBIT 3: Conceptual Site Plan

Sierra Avenue and Casa Grande Warehouse Project

\\orafp01\CA_ORA\ORA_AQN\094940115 - Fontana Sierra and Casa Grande EIR\2 Exhibits\GIS\03 Conceptual Site Plan.mxd

Not to Scale

Kimley»Horn

2 ACOUSTIC FUNDAMENTALS

2.1 Sound and Environmental Noise

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g. air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. In acoustics, the fundamental model consists of a noise source, a receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of a base of steady background noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micropascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness. Table 1: Typical Noise Levels provides typical noise levels.

Table 1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**– 70 –**	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	**– 60 –**	
		Large business office
Quiet urban daytime	**– 50 –**	Dishwasher in next room
Quiet urban nighttime	**– 40 –**	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	**– 0 –**	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) is the average noise level averaged over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of energy average during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined in Table 2: Definitions of Acoustical Terms.

Table 2: Definitions of Acoustical Terms

Term	Definitions
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in µPa (or 20 micronewtons per square meter), where 1 pascals is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in dB as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g. 20 µPa). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in dB as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
Maximum Noise Level (L_{max}) Minimum Noise Level (L_{min})	The maximum and minimum dBA during the measurement period.
Exceeded Noise Levels (L_{01}, L_{10}, L_{50}, L_{90})	The dBA values that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day-Night Noise Level (L_{dn})	A 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level (CNEL)	A 24-hour average L_{eq} with a 5 dBA weighting during the hours of 7:00 a.m. to 10:00 a.m. and a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A-weighted decibel (dBA) sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

A-Weighted Decibels

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by dBA values. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions. Under the dB scale, three sources of equal loudness together would produce an increase of 5 dBA.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The way older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted:

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A minimum 5-dBA change is required before any noticeable change in community response would be expected. A 5-dBA increase is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the

percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.[2]

2.2 Groundborne Vibration

Sources of groundborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g. factory machinery) or transient (e.g. explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations

Peak Particle Velocity (in/sec)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006-0.019	64-74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4-0.6	98-104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013.

[2] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

3 REGULATORY SETTING

To limit population exposure to physically or psychologically damaging as well as intrusive noise levels, the Federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

3.1 State of California

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable", "normally unacceptable", and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

Title 24 – Building Code

The State's noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new multi-family residential buildings, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.2 Local

City of Fontana General Plan

Adopted on November 13, 2018, the Fontana Forward General Plan Update 2015-2035 (Fontana General Plan) identifies noise standards that are used as guidelines to evaluate transportation noise level impacts. These standards are also used to assess the long-term traffic noise impacts on specific land uses. According to the Fontana General Plan, land uses such as residences have acceptable exterior noise levels of up to 65 dBA CNEL. Based on the guidelines in the Fontana General Plan, an exterior noise level of 65 dBA CNEL is generally considered the maximum exterior noise level for sensitive receptors.

Land uses near these significant noise-producers can incorporate buffers and noise control techniques including setbacks, landscaping, building transitions, site design, and building construction techniques to reduce the impact of excessive noise. Selection of the appropriate noise control technique would vary depending on the level of noise that needs to be reduced as well as the location and intended land use.

The City has adopted the Noise and Safety Element as a part of the updated Fontana General Plan. The Noise and Safety Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources. Additionally, the Noise and Safety Element identifies transportation noise policies designed to protect, create, and maintain an environment free of harmful noise that could impact the health and welfare of sensitive receptors. The following Fontana General Plan goals, policies, and actions for addressing noise are applicable to the Project:

Goal 8: The City of Fontana protects sensitive land uses from excessive noise by diligent planning through 2035.

Policy 8.2: Noise-tolerant land uses shall be guided into areas irrevocably committed to land uses that are noise-producing, such as transportation corridors.

Policy 8.4: Noise spillover or encroachment from commercial, industrial and educational land uses shall be minimized into adjoining residential neighborhoods or noise-sensitive uses.

Action C: The State of California Office of Planning and Research General Plan Guidelines shall be followed with respect to acoustical study requirements.

Goal 9: The City of Fontana provides a diverse and efficiently operated ground transportation system that generates the minimum feasible noise on its residents through 2035.

Policy 9.1: All noise sections of the State Motor Vehicle Code shall be enforced.

Policy 9.2: Roads shall be maintained such that the paving is in good condition and free of cracks, bumps, and potholes.

Action A: On-road trucking activities shall continue to be regulated in the City to ensure noise impacts are minimized, including the implementation of truck-routes based on traffic studies.

Action B: Development that generates increased traffic and subsequent increases in the ambient noise level adjacent to noise-sensitive land uses shall provide appropriate mitigation measures.

Action D: Explore the use of “quiet pavement” materials for street improvements.

Goal 10: Fontana’s residents are protected from the negative effects of “spillover” noise.

Policy 10.1: Residential land uses and areas identified as noise-sensitive shall be protected from excessive noise from non-transportation sources including industrial, commercial, and residential activities and equipment.

Action A: Projects located in commercial areas shall not exceed stationary-source noise standards at the property line of proximate residential or commercial uses.

Action B: Industrial uses shall not exceed commercial or residential stationary source noise standards at the most proximate land uses.

Action C: Non-transportation noise shall be considered in land use planning decisions.

Action D: Construction shall be performed as quietly as feasible when performed in proximity to residential or other noise sensitive land uses.

City of Fontana Municipal Code

Standards established under the City of Fontana Municipal Code (Municipal Code) are used to analyze noise impacts originating from the Project. Operational noise impacts are typically governed by Fontana Municipal Code Sections 18-61 through 18-67. However, the City currently relies on delineated general industrial areas. According to the General Plan Noise and Safety section, these areas are buffered from residential uses through land use zoning that places either light industrial or commercial uses between the major manufacturers involved in heavy industrial uses and local residents. This separation of land uses meaning noise intrusion on conforming land uses is not a problem at this time.

Guidelines for non-transportation and stationary noise source impacts from operations at private properties are found in the Zoning and Development Code in Chapter 30 of the Fontana Municipal Code. Applicable guidelines indicate that no person shall create or cause any sound exceeding the City's stated noise performance standards measured at the property line of any residentially zoned property. Per Fontana Municipal Code Section 30-543(A), the performance standards for exterior noise emanating from industrial uses are 65 dBA between the hours of 7:00 a.m. and 10:00 p.m. and 70 dBA during the noise-sensitive hours of 10:00 p.m. to 7:00 a.m. at residential uses. However, the nighttime performance standard in Section 30-543(A) should actually reference 65 dBA instead of the 70 dBA that is listed. For this analysis, a 65-dBA nighttime noise level standard is conservatively used to analyze potential noise impacts at off-site residential receptors within the City of Fontana.

The City has also set restrictions to control noise impacts from construction activities. Section 18-63(b)(7) states that the erection (including excavation), demolition, alteration, or repair of any structure shall only occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in the case of urgent necessity or otherwise approved by the City of Fontana. Although the Fontana Municipal Code limits the hours of construction, it does not provide specific noise level performance standards for construction.

4 EXISTING CONDITIONS

4.1 Existing Noise Sources

The City is impacted by various noise sources. Mobile sources of noise, especially cars, trucks, and trains are the most common and significant sources of noise. Other noise sources are the various land uses (i.e. residential, commercial, institutional, and recreational and parks activities) throughout the City that generate stationary-source noise.

Mobile Sources

Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and existing traffic volumes from the *Traffic Impact Study for the Proposed Sierra and Casa Grande Warehouse*, prepared by Kimley-Horn (December 2019) (Traffic Impact Study). The noise prediction model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (also referred to as energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data indicates that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along roadway segments in proximity to the Project site are included in Table 4: Existing Traffic Noise Levels. As shown in Table 4, existing traffic noise levels in the Project vicinity range between 67.2 dBA CNEL and 72.2 dBA CNEL.

Table 4: Existing Traffic Noise Levels

Roadway Segment	ADT	dBA CNEL[1]
Sierra Avenue		
North of Casa Grande Avenue	9,756	67.2
Between Casa Grande Drive and SR-210 WB Ramps	21,528	71.0
Between SR-210 WB Ramps and EB Ramps	25,283	71.7
South of SR-210 Eastbound Ramps	28,770	72.2

ADT = average daily trips; dBA = A-weighted decibels; CNEL= Community Equivalent Noise Level
1. Traffic noise levels are at 100 feet from the roadway centerline.
Source: Based on traffic data provided by Kimley-Horn and Associates, Inc., May 2020. Refer to Appendix A for traffic noise modeling results.

Stationary Sources

The primary sources of stationary noise in the Project vicinity are those associated with the operations of adjacent warehouse uses to the south and southeast of the Project. The noise associated with these sources may represent a single-event noise occurrence or short-term noise. Other noises include mechanical equipment (e.g., heating ventilation and air conditioning [HVAC] equipment), dogs barking, idling vehicles, and residents talking.

4.2 Noise Measurements

The Project site is currently vacant and unoccupied. To quantify existing ambient noise levels in the Project area, Kimley-Horn conducted three short-term noise measurements on February 20, 2020; see Appendix A: Noise Data. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the Project site. The 10-minute measurements were taken between 12:30 p.m. and 2:00 p.m. near potential sensitive receptors. Short-term L_{eq} measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in Table 5: Existing Noise Measurements and shown on Exhibit 4: Noise Measurement Locations.

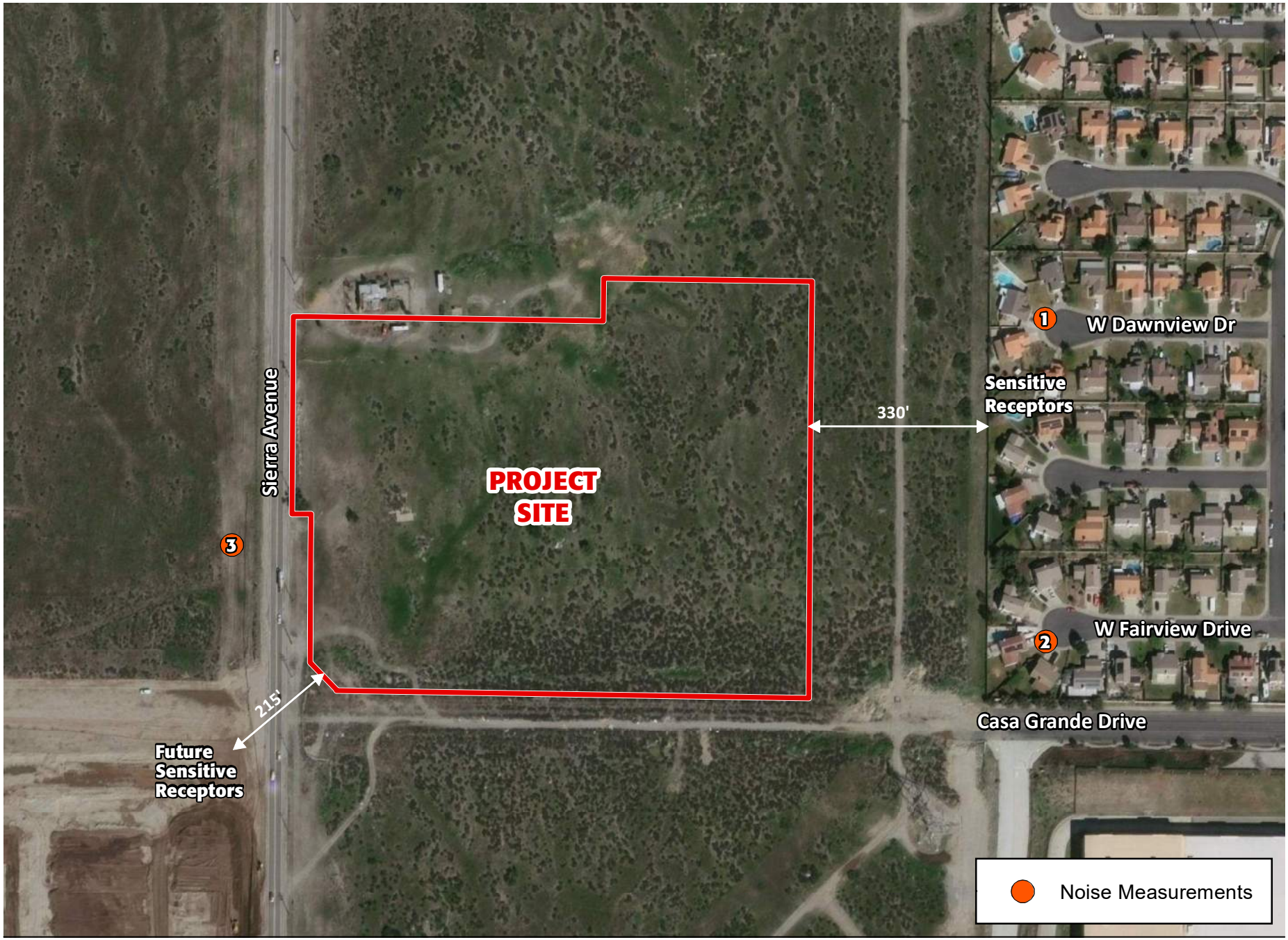
Table 5: Existing Noise Measurements

Site #	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	West Dawnview Drive cul-de-sac to the east of the Project site.	37.8	32.6	60.2	12:43 p.m.
2	West Fairview Drive cul-de-sac to the east of the Project site.	45.4	33.4	60.5	12:58 p.m.
3	To the west of the Project site along Sierra Avenue.	73.2	40.6	89.9	1:25 p.m.

Source: Noise measurements taken by Kimley-Horn, February 20, 2020. See Appendix A for noise measurement results.

4.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses surrounding the Project consist mostly of single-family residential communities. Sensitive land uses near the Project include the single-family residential communities 330 feet to the east and a future residential community currently under construction, located 215 feet to the southwest.



Source: Kimley-Horn, ESRI World Imagery

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EXHIBIT 4: Noise Measurement Locations
Sierra Avenue and Casa Grande Warehouse Project

0 125 250
Feet

Kimley»Horn

5 SIGNIFICANCE CRITERIA AND METHODOLOGY

5.1 CEQA Thresholds

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains analysis guidelines related to noise impacts. These guidelines have been used by the City to develop thresholds of significance for this analysis. A project would create a significant environmental impact if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive groundborne vibration or groundborne noise levels; and
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels.

5.2 Methodology

This analysis of the Existing and With Project noise environments is based on noise prediction modeling and empirical observations. Construction noise levels were based on typical noise levels generated by construction equipment published by the Federal Transit Administration. Reference noise levels are used to estimate operational noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from Federal Transit Administration (FTA) published data for construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, considering the distance from construction activities to nearby land uses and typically applied criteria for structural damage and human annoyance.

6 POTENTIAL IMPACTS AND MITIGATION

6.1 Acoustical Impacts

Threshold 6.1 Would the Project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g. land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods surrounding the construction site. Project construction would occur adjacent to existing residential uses located approximately 330 feet to the east and 215 feet to the southwest from the Project construction area. However, it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at a single point near sensitive receptors.

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g. land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods surrounding the construction site. Project construction would occur adjacent to existing residential uses as close as 215 feet from potential construction. However, it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at a single point near sensitive receptors.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities would require concrete/industrial saws, excavators, and dozers during demolition; dozers and tractors during site preparation; excavators, graders, and dozers during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are listed in Table 6: Typical Construction Noise Levels.

Table 6: Typical Construction Noise Levels			
Equipment	**Typical Noise Level (dBA) at 50 feet from Source**	**Typical Noise Level (dBA) at 100 feet from Source[1]**	**Typical Noise Level (dBA) at 215 feet from Source[1]**
Air Compressor	80	74	67
Backhoe	80	74	67
Compactor	82	76	69
Concrete Mixer	85	77	72
Concrete Pump	82	76	69
Concrete Vibrator	76	79	63
Crane, Derrick	88	76	75
Crane, Mobile	83	70	70
Dozer	85	82	72
Generator	82	77	69
Grader	85	79	72
Impact Wrench	85	76	72
Jack Hammer	88	79	75
Loader	80	79	67
Paver	85	82	72
Pile-driver (Impact)	101	74	88
Pile-driver (Sonic)	95	79	82
Pneumatic Tool	85	95	72
Pump	77	89	64
Roller	85	79	72
Saw	76	71	63
Scraper	85	84	72
Shovel	82	89	69
Truck	84	79	71
Note: 1. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1+20Log(d_1/d_2)$ Where: dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance			
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.			

As shown in Table 6, exterior noise levels could affect the nearest existing sensitive receptors in the vicinity. Sensitive uses in the Project site vicinity include existing residential uses to the east and southwest. These sensitive receptors may be exposed to elevated noise levels during Project construction. However, construction noise would be acoustically dispersed throughout the Project site and not concentrated in one area near surrounding sensitive uses. The City's Municipal Code does not establish quantitative construction noise standards. Instead, the Municipal Code establishes limited hours of construction activities. Municipal Code Section 18-63 states that construction activities may only take place between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in the case of urgent necessity or otherwise approved by the City of Fontana. All motorized equipment used in such activity shall be equipped with functioning mufflers as mandated by the state.

Construction activities may also cause increased noise along site access routes due to movement of equipment and workers. Compliance with the Municipal Code would minimize impacts from construction noise, as construction would be limited to daytime hours on weekdays and Saturdays. By following

Municipal Code standards, Project construction activities would result in a less than significant noise impact.

Operations

Implementation of the proposed Project would create new sources of noise in the project vicinity. The major noise sources associated with the Project that would potentially impact existing and future nearby residences include stationary noise equipment (i.e. trash compactors, air conditioners, etc.); truck and loading dock (i.e. slow moving truck on the site, maneuvering and idling trucks, equipment noise); parking areas (i.e. car door slamming, car radios, engine start-up, and car pass-by); and off-site traffic noise.

Mechanical Equipment

The nearest sensitive receptors to the Project site are the residences 330 feet east and 215 feet southwest of the Project site. Potential stationary noise sources related to long-term operation of residential development in the Project site would include mechanical equipment. Mechanical equipment (e.g. heating ventilation and air conditioning [HVAC] equipment) typically generates noise levels of approximately 52 dBA at 50 feet.[3] HVAC noise levels would attenuate to approximately 39.3 dBA at the nearest residences located approximately 215 feet southwest of the Project site, which is well below he City's 65 dBA noise standard for residential uses. Operation of mechanical equipment would not increase ambient noise levels beyond the acceptable compatible land use noise levels. Further, it is noted that noise from stationary sources at the Project site would primarily occur during the daytime activity hours of 7:00 a.m. to 10:00 p.m. Therefore, the proposed project would result in a less than significant impact related to stationary noise levels.

Truck and Loading Dock Noise

During loading and unloading activities, noise would be generated by the trucks' diesel engines, exhaust systems, and brakes during low gear shifting' braking activities; backing up toward the docks; dropping down the dock ramps; and maneuvering away from the docks. Loading/unloading activities would occur on the southern portion of the proposed warehouse building in the southern portion of the Project site. Driveways and access to the site would occur along Almond Avenue. As noted above, Section 30-543(A) of the Municipal Code limits noise from industrial uses.

The proposed warehouse building includes dock-high doors for truck loading/unloading and manufacturing/light industrial operations. The dock-high doors are set back approximately 500 feet from the nearest residences to the east and southwest of the Project site. Loading dock noise is approximately 68 dB at 50 feet.[4] Loading dock noise levels would be approximately 48 dB at the nearest receptors conservatively assuming a clear line of sight and no attenuation from intervening walls or structures. Furthermore, loading dock doors would be surrounded with protective aprons, gaskets, or similar improvements that, when a trailer is docked, would serve as a noise barrier between the interior warehouse activities and the exterior loading area. This would attenuate noise emanating from interior activities, and as such, interior loading and associated activities would be permissible during all hours of

[3] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.

[4] Charles M. Salter Associates, Inc., *Midpoint at 237 Loading Dock Noise Study,* March 27, 2014.

the day. Therefore, noise levels associated with truck loading/unloading activities would not exceed the City's noise standards of 65 dBA for residential uses.

Trucks at the Project site would also utilize backup alarms during loading/unloading activities. Backup alarms produce a typical noise level of 79 dB at 30 feet.[5] At 500 feet, backup alarm noise levels would be approximately 54.6 dB[6] and would be below the City's 65 dBA noise standard for residential uses. Therefore, noise levels from trucks and loading/unloading activities would not exceed any local noise standards and a less than significant impact would occur.

Parking Noise

The Project would provide 175 parking stalls, 45 trailers stalls, and 11 dock doors, and up to 136 parking stalls and 69 trailer stalls in the future (see Section 1.2, *Project Description*). Parking stalls would located on all sides of the proposed warehouse building near the site perimeter. Nominal parking noise would occur within the on-site parking facilities. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. The instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA[7] and may be an annoyance to adjacent noise-sensitive receptors. Conversations in parking areas may also be an annoyance to adjacent sensitive receptors. Sound levels of speech typically range from 33 dBA at 50 feet for normal speech to 50 dBA at 50 feet for very loud speech.[8] It should be noted that parking lot noises are instantaneous noise levels compared to noise standards in the hourly L_{eq} metric, which are averaged over the entire duration of a time period.

Additionally, parking noise also occurs at the adjacent properties to the east, southeast, and southwest under existing conditions. Parking and driveway noise would be consistent with existing noise in the vicinity and would be partially masked by background traffic noise from motor vehicles traveling along Sierra Avenue and Casa Grande Drive. Actual noise levels over time resulting from parking activities are anticipated to be far below the local noise standards. Therefore, noise impacts associated with parking would be less than significant.

Off-Site Traffic Noise

Implementation of the Project would generate increased traffic volumes along nearby roadway segments. According to the Traffic Impact Study, the proposed Project would generate 554 daily trips which would result in noise increases on Project area roadways. In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable.[9] Generally, traffic volumes on Project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant.

[5] Ibid.

[6] Based on the inverse square law for sound attenuation, and assuming a minimum of 5 dB noise reduction from the intervening warehouse building on the proposed Project site (FHWA, 2006).

[7] Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.

[8] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.

[9] Federal Highway Administration, *Highway Traffic Noise Analysis and Abatement Policy and Guidance, Noise Fundamentals*, https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed March 11, 2020.

Traffic noise levels for roadways primarily affected by the Project were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise modeling was conducted for conditions with and without the Project, based on traffic volumes from the Traffic Impact Analysis. As indicated in Table 7: Existing and Project Traffic Noise Levels, Existing Plus Project traffic-generated noise levels on Project area roadways would range between 67.3 dBA CNEL and 72.3 dBA CNEL at 100 feet from the centerline, and the Project would result in a maximum increase of 0.1 dBA CNEL along Sierra Avenue. In addition, as shown in Table 8: Opening Year and Opening Year Plus Project Traffic Noise Levels, Opening Year Plus Project traffic noise levels on Project area roadways range between 68.3 dBA CNEL and 72.5 dBA CNEL at 100 feet from the centerline, and the Project would result in a maximum increase of 0.1 dBA CNEL along Sierra Avenue. As such, the Project would result in an increase of less than 3.0 dBA CNEL for the roadway segments analyzed and traffic noise. A less than significant impact would occur in this regard.

Table 7: Existing and Project Traffic Noise Levels

Roadway Segment	Existing		Existing Plus Project		Project Change from Existing Conditions	Significant Impact?
	ADT	dBA CNEL[1]	ADT	dBA CNEL[1]		
Sierra Avenue						
North of Casa Grande Avenue	9,756	67.2	9,895	67.3	0.1	No
Between Casa Grande Drive and SR-210 WB Ramps	21,528	71.0	22,179	71.1	0.1	No
Between SR-210 WB Ramps and EB Ramps	25,283	71.7	25,718	71.8	0.1	No
South of SR-210 Eastbound Ramps	28,770	72.2	28,987	72.3	0.0	No

ADT = average daily trips; dBA = A-weighted decibels; CNEL= Community Equivalent Noise Level
1. Traffic noise levels are at 100 feet from the roadway centerline.
Source: Based on traffic data provided by Kimley-Horn and Associates, Inc., March 2020. Refer to Appendix A for traffic noise modeling results.

Table 8: Opening Year and Opening Year Plus Project Traffic Noise Levels

Roadway Segment	Opening Year		Opening Year Plus Project		Project Change from Existing Conditions	Significant Impact?
	ADT	dBA CNEL[1]	ADT	dBA CNEL[1]		
Sierra Avenue						
North of Casa Grande Avenue	12,269	68.2	12,408	68.3	0.0	No
Between Casa Grande Drive and SR-210 WB Ramps	27,000	72.0	27,589	72.1	0.1	No
Between SR-210 WB Ramps and EB Ramps	29,061	72.3	29,337	72.4	0.0	No
South of SR-210 Eastbound Ramps	30,463	72.5	30,842	72.5	0.1	No

ADT = average daily trips; dBA = A-weighted decibels; CNEL= Community Equivalent Noise Level
1. Traffic noise levels are at 100 feet from the roadway centerline.
Source: Based on traffic data provided by Kimley-Horn and Associates, Inc., March 2020. Refer to Appendix A for traffic noise modeling results.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.2 Would the Project generate excessive groundborne vibration or groundborne noise levels?

Increases in groundborne vibration levels attributable to the proposed Project would be primarily associated with short-term construction-related activities. The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations in their 2018 *Transit Noise and Vibration Impact Assessment Manual*. The types of construction vibration impacts include human annoyance and building damage.

Human annoyance is evaluated in vibration decibels (VdB) (the vibration velocity level in decibel scale) and occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. The FTA Transit Noise and Vibration Impact Assessment Manual identifies 75 VdB as the approximate threshold for annoyance. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience cosmetic damage (e.g. plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec is considered safe and would not result in any vibration damage.

Table 9: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet and 215 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 9, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity, which is below the FTA's 0.20 PPV threshold. The nearest sensitive receptors are the residential uses located approximately 215 feet to the southwest of the active construction zone.

Table 9: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 100 Feet (in/sec)[1]	Approximate VdB at 25 Feet	Approximate VdB at 215 Feet[2]
Large Bulldozer	0.089	0.011	87	59
Caisson Drilling	0.089	0.011	87	59
Loaded Trucks	0.076	0.010	86	58
Jackhammer	0.035	0.004	79	51
Small Bulldozer/Tractors	0.003	0.000	58	30

Notes:
1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.
2. Calculated using the following formula: Lv(D) = Lv(25 feet) - (30 x log10(D/25 feet)) per the FTA Transit Noise and Vibration Impact Assessment Manual (2018).

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.

As shown in Table 9, construction VdB levels would not exceed 59 VdB at 215 feet (i.e. below the 75 VdB annoyance threshold). It is also acknowledged that construction activities would occur throughout the

Project site and would not be concentrated at the point closest to the nearest residential structure(s). Therefore, vibration impacts associated with the Project construction would be less than significant.

Once operational, the Project would not be a significant source of groundborne vibration. Groundborne vibration surrounding the Project currently result from heavy-duty vehicular travel (e.g. refuse trucks, heavy duty trucks, delivery trucks, and transit buses) on the nearby local roadways. Operations of the proposed Project would include truck deliveries. Due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. According to the FTA's Transit Noise and Vibration Impact Assessment, trucks rarely create vibration levels that exceed 70 VdB (equivalent to 0.012 inches per second PPV) when they are on roadways. Therefore, trucks operating at the Project site or along surrounding roadways would not exceed FTA thresholds for building damage or annoyance. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.3 For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

The nearest airport to the Project site is the Ontario International Airport located approximately 10.5 miles to the southwest. The Project is not within 2.0 miles of a public airport or within an airport land use plan. Additionally, there are no private airstrips located within the Project vicinity. Therefore, the Project would not expose people residing or working in the Project area to excessive airport- or airstrip-related noise levels and no mitigation is required.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

6.2 Cumulative Noise Impacts

The Project's construction activities would not result in a substantial temporary increase in ambient noise levels. The City permits construction activities between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays (except in the case of urgent necessity or otherwise approved by the City of Fontana), and prohibited on Sundays and Federal holidays. There would be periodic, temporary, noise impacts that would cease upon completion of construction activities. The Project would contribute to other proximate construction project noise impacts if construction activities were conducted concurrently. However, based on the noise analysis above, the Project's construction-related noise impacts would be less than significant following compliance with the General Plan and the Municipal Code. Given that noise dissipates as it travels away from its source, operational noise impacts from on-site activities and other stationary sources would be limited to the Project site and vicinity. Thus, cumulative operational noise impacts from related projects, in conjunction with Project specific noise impacts, would not be cumulatively significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

7 REFERENCES

1. California Department of Transportation, *California Vehicle Noise Emission Levels*, 1987.
2. California Department of Transportation, *Traffic Noise Analysis Protocol*, 2011.
3. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013.
4. California Department of Transportation, *Transportation Related Earthborne Vibrations*, 2002.
5. California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013.
6. City of Fontana, *General Plan*, 2018.
7. City of Fontana, *Municipal Code*, 2018.
8. Federal Highway Administration, *Roadway Construction Noise Model*, 2006.
9. Federal Highway Administration, *Roadway Construction Noise Model User's Guide Final Report*, 2006.
10. Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, 1992.
11. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.
12. United States Environmental Protection Agency, *Protective Noise Levels (EPA 550/9-79-100)*, 1979.

Appendix A

NOISE DATA

Noise Measurement Field Data

Project:	Fontana Sierra and Casa Grande	**Job Number:**	094940115
Site No.:	1	**Date:**	2/20/2020
Analyst:	Alex Howard	**Time:**	12:43 - 12:53 PM
Location:	2890 W Dawnview Dr, Rialto		
Noise Sources:	Road noise		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
37.8	32.6	60.2	100.7

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	64
Wind (mph):	< 5
Sky:	Clear
Bar. Pressure:	30.04" Hg
Humidity:	39%

Photo:



Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	FONT_.005	Computer's File Name	SLM_0005586_FONT__005.00.ldbin
Meter	LxT SE		
Firmware	2.402		
User	Alex Howard	Location	
Description	Fontana		
Note			
Start Time	2020-02-20 12:43:54	Duration	0:10:00.0
End Time	2020-02-20 12:53:54	Run Time	0:10:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	37.8 dB		
LAE	65.6 dB	SEA	--- dB
EA	0.4 µPa²h		
LZ_{peak}	100.7 dB	2020-02-20 12:44:03	
LAS_{max}	60.2 dB	2020-02-20 12:44:03	
LAS_{min}	32.6 dB	2020-02-20 12:50:41	
LA_{eq}	37.8 dB		
LC_{eq}	56.2 dB	LC_{eq} - LA_{eq}	18.3 dB
LAI_{eq}	46.8 dB	LAI_{eq} - LA_{eq}	9.0 dB

Exceedances

	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
37.8 dB	37.8 dB	0.0 dB

LDEN	LDay	LEve	LNight
37.8 dB	37.8 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	37.8 dB		56.2 dB		--- dB	
$LS_{(max)}$	60.2 dB	2020-02-20 12:44:03	--- dB		--- dB	
$LS_{(min)}$	32.6 dB	2020-02-20 12:50:41	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		100.7 dB	2020-02-20 12:44:03

Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	39.2 dB
LAS 10.0	37.7 dB
LAS 33.3	35.7 dB
LAS 50.0	34.8 dB
LAS 66.6	34.3 dB
LAS 90.0	33.4 dB

Time History



Noise Measurement Field Data

Project:	Fontana Sierra and Casa	**Job Number:**	094940115
Site No.:	2	**Date:**	2/20/2020
Analyst:	Alex Howard	**Time:**	12:58 - 1:08 PM
Location:	2896 West Fairview Drive		
Noise Sources:	Road noise		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
45.4	33.4	60.5	100.3

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	75
Wind (mph):	< 5
Sky:	Partly Cloudy
Bar. Pressure:	30.08" Hg
Humidity:	39%

Photo:



Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	FONT_.006	Computer's File Name	SLM_0005586_FONT__006.00.ldbin
Meter	LxT SE		
Firmware	2.402		
User	Alex Howard	Location	
Description	Fontana		
Note			
Start Time	2020-02-20 12:58:26	Duration	0:10:00.0
End Time	2020-02-20 13:08:26	Run Time	0:10:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	45.4 dB		
LAE	73.2 dB	SEA	--- dB
EA	2.3 µPa²h		
LZ_{peak}	100.3 dB	2020-02-20 12:58:32	
LAS_{max}	60.5 dB	2020-02-20 13:07:28	
LAS_{min}	33.4 dB	2020-02-20 12:58:26	
LA_{eq}	45.4 dB		
LC_{eq}	57.8 dB	LC_{eq} - LA_{eq}	12.5 dB
LAI_{eq}	50.8 dB	LAI_{eq} - LA_{eq}	5.4 dB

Exceedances	Count	Duration
LAS > 85.0 dB	0	0:00:00.0
LAS > 115.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	45.4 dB	45.4 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	45.4 dB	45.4 dB	--- dB	--- dB

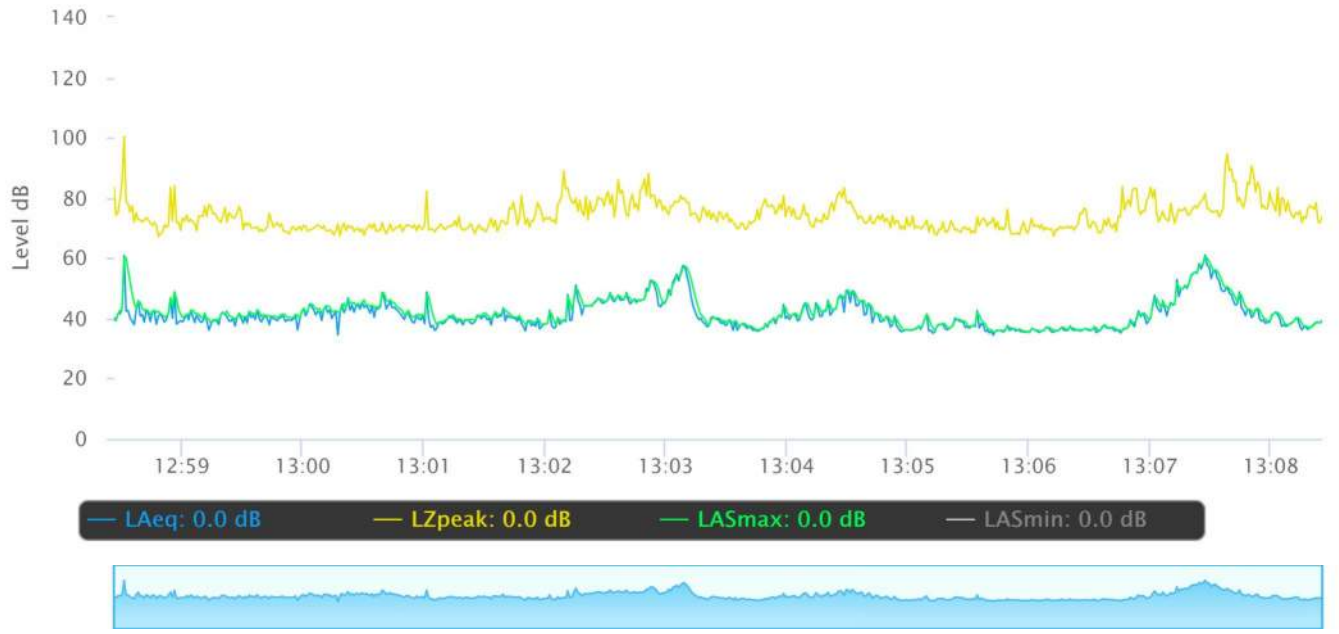
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	45.4 dB		57.8 dB		--- dB	
$LS_{(max)}$	60.5 dB	2020-02-20 13:07:28	--- dB		--- dB	
$LS_{(min)}$	33.4 dB	2020-02-20 12:58:26	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		100.3 dB	2020-02-20 12:58:32

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	51.2 dB
LAS 10.0	47.5 dB
LAS 33.3	42.1 dB
LAS 50.0	40.2 dB
LAS 66.6	38.9 dB
LAS 90.0	36.3 dB

Time History



Noise Measurement Field Data

Project:	Fontana Sierra and Casa	**Job Number:**	094940115
Site No.:	3	**Date:**	2/20/2020
Analyst:	Alex Howard	**Time:**	1:25 - 1:35 PM
Location:	4750 Sierra Ave.		
Noise Sources:	Road noise		
Comments:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
73.2	40.6	89.9	115.3

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	75
Wind (mph):	< 5
Sky:	Partly Cloudy
Bar. Pressure:	30.08" Hg
Humidity:	39%

Photo:



Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	FONT_.007	Computer's File Name	SLM_0005586_FONT__007.00.ldbin
Meter	LxT SE		
Firmware	2.402		
User	Alex Howard	Location	
Description	Fontana		
Note			
Start Time	2020-02-20 13:25:45	Duration	0:10:00.0
End Time	2020-02-20 13:35:45	Run Time	0:10:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	73.2 dB		
LAE	101.0 dB	SEA	--- dB
EA	1.4 mPa²h		
LZ_{peak}	115.3 dB	2020-02-20 13:31:26	
LAS_{max}	89.9 dB	2020-02-20 13:26:48	
LAS_{min}	40.6 dB	2020-02-20 13:27:35	
LA_{eq}	73.2 dB		
LC_{eq}	79.4 dB	LC_{eq} - LA_{eq}	6.2 dB
LAI_{eq}	77.2 dB	LAI_{eq} - LA_{eq}	4.0 dB

Exceedances	Count	Duration
LAS > 85.0 dB	2	0:00:04.9
LAS > 115.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	73.2 dB	73.2 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	73.2 dB	73.2 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	73.2 dB		79.4 dB		--- dB	
$LS_{(max)}$	89.9 dB	2020-02-20 13:26:48	--- dB		--- dB	
$LS_{(min)}$	40.6 dB	2020-02-20 13:27:35	--- dB		--- dB	
$L_{Peak(max)}$	--- dB		--- dB		115.3 dB	2020-02-20 13:31:26

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	78.0 dB
LAS 10.0	76.4 dB
LAS 33.3	72.7 dB
LAS 50.0	69.5 dB
LAS 66.6	63.4 dB
LAS 90.0	47.4 dB

Time History



FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Sierra Casa Grande
Project Number: 94940115
Scenario: Existing
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Sierra Ave	North of Casa Grande Drive	2	0	9,756	30	0	4.6%	12.3%	67.2	53	166	526	1,663
2	Sierra Ave	Between Casa Grande Drive and SR-210 WB Ramp	6	20	21,528	30	0	4.6%	12.3%	71.0	126	400	1,264	3,997
3	Sierra Ave	Between SR-210 WB Ramp and SR-210 EB Ramp	6	20	25,283	30	0	4.6%	12.3%	71.7	148	469	1,484	4,694
4	Sierra Ave	South of SR-210 EB Ramp	6	15	28,770	30	0	4.6%	12.3%	72.2	167	528	1,670	5,281

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Sierra Casa Grande
Project Number: 94940115
Scenario: Existing Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Sierra Ave	North of Casa Grande Drive	2	0	9,895	30	0	4.6%	12.3%	67.3	53	169	533	1,687
2	Sierra Ave	Between Casa Grande Drive and SR-210 WB Ramp	6	20	22,179	30	0	4.6%	12.3%	71.1	130	412	1,302	4,118
3	Sierra Ave	Between SR-210 WB Ramp and SR-210 EB Ramp	6	20	25,718	30	0	4.6%	12.3%	71.8	151	477	1,510	4,775
4	Sierra Ave	South of SR-210 EB Ramp	6	15	28,987	30	0	4.6%	12.3%	72.3	168	532	1,682	5,320

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Sierra Casa Grande
Project Number: 94940115
Scenario: Opening Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Sierra Ave	North of Casa Grande Drive	2	0	12,269	30	0	4.6%	12.3%	68.2	66	209	661	2,091
2	Sierra Ave	Between Casa Grande Drive and SR-210 WB Ramp	6	20	27,000	30	0	4.6%	12.3%	72.0	159	501	1,585	5,013
3	Sierra Ave	Between SR-210 WB Ramp and SR-210 EB Ramp	6	20	29,061	30	0	4.6%	12.3%	72.3	171	540	1,706	5,395
4	Sierra Ave	South of SR-210 EB Ramp	6	15	30,463	30	0	4.6%	12.3%	72.5	177	559	1,768	5,591

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Sierra Casa Grande
Project Number: 94940115
Scenario: Opening Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway				
#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	CNEL at 100 Feet	Distance to Contour 70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Sierra Ave	North of Casa Grande Drive	2	0	12,408	30	0	4.6%	12.3%	68.3	67	211	669	2,115
2	Sierra Ave	Between Casa Grande Drive and SR-210 WB Ramp	6	20	27,589	30	0	4.6%	12.3%	72.1	162	512	1,620	5,122
3	Sierra Ave	Between SR-210 WB Ramp and SR-210 EB Ramp	6	20	29,337	30	0	4.6%	12.3%	72.4	172	545	1,722	5,447
4	Sierra Ave	South of SR-210 EB Ramp	6	15	30,842	30	0	4.6%	12.3%	72.5	179	566	1,790	5,661

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

Kimley»Horn

MEMORANDUM

To:	Kari Cano
From:	Alex Pohlman
	Kimley-Horn and Associates, Inc.
Date:	June 2, 2020
Subject:	Mango Replacement Site: Proposed Sierra Casa Grande Warehouse Residential Replacement Site – Noise Impacts

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Purpose

The purpose of this memorandum is to identify noise impacts associated with the proposed residential replacement site located on the northwest corner of Malaga Street and Mango Avenue (Mango Replacement Site) in the City of Fontana. Specifically, this analysis addresses the air quality impacts referenced in State CEQA Guidelines.

Project Description

The project is proposing residential replacement sites for the development of residential dwelling units at two project sites within the City of Fontana in efforts to account for the potential residential dwelling units lost with the development of the proposed Sierra Avenue at Casa Grande Drive Warehouse. The two replacement sites are proposed within the City of Fontana and are shown on Exhibit 1. One replacement site is located on the northwest corner of the intersection of Mango Avenue at Malaga Street. The site is currently 5.69 acres and occupied by 14 existing residential dwelling units. The second replacement site, located on the northeast corner of the intersection of Palmetto Avenue at Arrow Boulevard (Palmetto Replacement Site), is mentioned in this memorandum yet analyzed a separate document.

The replacement of residential land uses due to the development of the Sierra Avenue at Casa Grande Drive Warehouse would result in the development of a maximum of 219 new residential dwelling units, in addition to the existing units on each site. The 219 dwelling units would be split proportionally between the two replacement sites as follows:

- **Malaga Street/Mango Avenue Site**: 195 new dwelling units
  - 14 existing dwelling units
  - 209 onsite total dwelling units

  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

- **Palmetto Avenue/Arrow Boulevard Site**: 24 new dwelling units
  - 8 existing dwelling units
  - 32 onsite total dwelling units
  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

Noise Background

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of various distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise as well as the time of day when the noise occurs. For example, the equivalent continuous sound level (L_{eq}) is the average acoustic energy content of noise for a stated period of time; thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. The Day-Night Sound level (L_{dn}) is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 PM to 7:00 AM to account for noise sensitivity in the nighttime. The Community Noise Equivalent Level (CNEL) is a 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 PM to 7:00 AM and an additional 5 dBA weighting during the hours of 7:00 PM to 10:00 PM to account for noise sensitivity in the evening and nighttime.

Regulatory Setting

City of Fontana General Plan

The City of Fontana General Plan Noise and Safety Element (Noise Element) ensures that development accounts for physical constraints and the natural hazards of the land. The noise component of the General Plan identifies potential noise problems and exposure in the community and provides an integrated approach to regulating noise. The City currently regulates noise levels and exposure, consistent, consistent with this Plan, in the Zoning and Development Code.

Goal 8: The City of Fontana protects sensitive land uses from excessive noise by diligent planning through 2035.

Policy 8.1: New sensitive land uses shall be prohibited in incompatible areas.

Policy 8.2: Noise-tolerant land uses shall be guided into areas irrevocable committed to land uses that are noise-producing, such as transportation corridors.

Policy 8.3: Where sensitive uses are to be placed along transportation routes, mitigation shall be provided to ensure compliance with state-mandated noise levels.

Policy 8.4: Noise spillover or encroachment from commercial, industrial and educational land uses shall be minimized into adjoining residential neighborhoods or noise-sensitive users.

Goal 9: The City of Fontana provides a diverse and efficiently operated ground transportation system that generates the minimum feasible noise on its residents through 2035.

Policy 9.1: All noise sections of the State Motor Vehicle Code shall be enforced.

Policy 9.2: Roads shall be maintained such that paving is in good condition and free of cracks, bumps, and potholes.

Policy 9.3: Noise mitigation shall be included in the design of new roadway projects in the city.

Goal 10: Fontana's residents are protected from the negative effects of "spillover" noise.

Policy 10.1: Residential land uses and areas identified noise-sensitive shall be protected fro excessive noise from non-transportation sources including industrial, commercial, and residential activities and equipment.

City of Fontana Municipal Code

Chapter 18, Article II. Section 18-63. – Prohibited Noises

(b) The following acts, which create loud, excessive, impulsive or intrusive sound or noise that annoys or disturbs persons of ordinary sensibilities from a distance of 50 feet or more from the edge of the property, structure or unit in which the source is located, are declared to be in violation of this article.

Section 18-63(b)(6) Loading, unloading or opening boxes. The creation of load, excessive or intrusive and excessive noise in connection with loading or unloading of any vehicle or the opening and destruction of bales, boxes, crates and containers.

Section 18-63(b)(7) Construction or repairing of buildings or structures. The erection (including excavating), demolition, alteration or repair of any building or structure other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector, which permit may be granted for a period not to exceed three days or less while the emergency continues and which permit may be renewed for periods of three days or less while the emergency continues. If the building inspector should determine that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or structure or the excavation of streets and highways within the hours of 6:00 p.m. and 7:00 a.m., and if he shall further determine that loss or inconvenience would result to any party in interest, he may grant permission for such work to be done on weekdays within the hours of 6:00 p.m. and 7:00 a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work.

Section 18-63(b)(8) Noise near schools, courts, place of worship or hospitals. The creation of any loud, excessive, impulsive or intrusive noise on any street adjacent to any school, institution of learning, places of worship or court while the premises are in use, or adjacent to any hospital which unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital; provided conspicuous signs are displayed in such streets indicating that the street is a school, hospital or court street.

Chapter 30, Article V. Division 6, Sec. 30-182. - Noise

(a) No use shall create or cause to be created any sound that exceeds the ambient noise standards outlined in Table 30-182.A (**Table 1, Noise Standards**)

(b) No use shall create or cause creation of noise from a portable electronic device such as a car stereo, portable radio and/or cassette/compact disc player or similar device which exceeds the ambient noise standards outlined in Table 30-182.A (**Table 1**)

Table 1: Noise Standards		
Location of Measurement	**Maximum Allowable**	
All Zoning Districts	**7:00 a.m. to 10:00 p.m.**	**10:00 p.m. to 7:00 a.m.**
Interior	45 db	45 db
Exterior	65 db	65 db
Source: Fontana Municipal Code, Chapter 30, Article V. Division 6, Sec. 30-182. – Noise, Table 30-469		

Chapter 30, Article V. Division 6, Sec. 30-183. - Vibration

No use shall create or cause to be created any activity that causes a vibration that can be felt beyond the property line with or without the aid of an instrument.

Chapter 30, Article VII. Division 6, Sec. 30-259. - Vibration
(a) Noise levels. No person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property: (1) The noise level between 7:00 a.m. and 10:00 p.m. shall not exceed 70 db(A). (2) The noise level between 10:00 p.m. and 7:00 a.m. shall not exceed 65 db(A).

(b) Noise measurements. Noise shall be measured with a sound level meter that meets the standards of the American National Standards Institute (ANSI) Section SI4-1979, Type 1 or Type 2. Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (reference pressure = 20 micronewtons per meter squared).

(c) Vibration. No person shall create or cause to be created any activity which causes a vibration which can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument.

Significance Criteria

Criteria for determining the significance of noise impacts were developed based on information contained in the Fontana General Plan and Fontana Municipal Code. A significant impact related to noise would occur if:

- Project construction activities occur outside the hours that construction noise is considered exempt as specified in the City of Fontana Municipal Code, Section 18-63(7), 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays
    - and Project construction noise levels would exceed the exterior 65 dBA noise level standard
    - and the Project creates a community noise level increase of greater than 3 dBA L_{eq}.

- Off-site traffic noise levels, without or with the Project at existing or future noise-sensitive land uses exceed the City of Fontana General Plan noise standard of 65 dBA CNEL and the Project creates a community noise level increase of greater than 3 dBA CNEL.

- Project construction vibration levels exceed the Caltrans human annoyance vibration threshold of 0.2 in/sec PPV at adjacent uses (Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual). The FTA threshold is used to quantify

potential impacts related to perception of short-term construction-related vibration levels.

Noise Impacts

Construction Noise

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods near the construction site.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities would require concrete/industrial saws, excavators, and dozers during demolition, tractors and dozers during site preparation; graders, dozers, excavators, and tractors during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are listed in **Table 2: Typical Construction Noise Levels**. It should be noted that the noise levels shown in **Table 2** are maximum noise levels (i.e., the equipment engine at maximum speed). However, equipment used on construction sites typically operates under less than full power conditions, or part power.

Noise-sensitive uses closest to the project site include residences to north located adjacent to the Project site. As shown in **Table 2**, construction noise levels would range from approximately 76 dBA to 85 dBA at a distance of 50 feet. As such, noise levels at the residences to the north of the project site could exceed ambient noise levels and may cause periodic disturbance during the construction period. However, Section 18-63(7) exempts construction noise between the hours of 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays. Construction activities for the proposed Project would only occur during the time period specified in the Municipal Code. Additionally, construction noise from the project would be acoustically dispersed throughout the project site (depending on what construction phase or activity is occurring) and not concentrated in one area near surrounding uses for an extended period of time. As such, construction-related noise impacts would be less than significant in this regard.

Table 2: Typical Construction Noise Levels	
Equipment	**Typical Noise Level (dBA L_{max}) at 50 feet from Source**
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84
dBA = A-weighted decibel; L_{max} = maximum A-weighted sound level	
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.	

Operational Noise

Implementation of the proposed project would result in noise sources typical of residential developments in the area. The major noise sources associated with the project would include off-site traffic noise. The closest sensitive receptors are located to the north, adjacent to the project site.

Project implementation would generate increased traffic volumes along Mango Avenue and Project area roadways. According to the trip generation analysis, the Project would result in an additional 820 average daily vehicle trips. The Project's increase in traffic would result in noise increases on Project area roadways. In general, a 3-dBA increase in traffic noise is barely perceptible to people, while a 5-dBA increase is readily noticeable. Traffic volumes on Project area roadways would have to approximately double for the resulting traffic noise levels to generate a 3-dBA increase[1]. According to the Background Report identified as Appendix 1 of the Fontana General Plan, the daily average daily traffic along Mango Avenue (between Foothill Boulevard and Miller Avenue) is 8,900 vehicles[2].

[1] According to the California Department of Transportation, *Technical Noise Supplement to Traffic Noise Analysis Protocol* (September 2013), it takes a doubling of traffic to create a noticeable (i.e., 3 dBA) noise increase

[2] City of Fontana, *Fontana General Plan Update: Background Report*, November 13, 2018

Therefore, because the increase of 820 daily trips generated by the proposed Project is not enough to double the number of trips along Mango Avenue, the Project would not generate sufficient traffic to result in a permanent 3-dBA increase in ambient noise levels. Noise impacts associated with traffic would be less than significant.

Vibration Impacts

Increases in groundborne vibration levels attributable to the project would be primarily associated with short-term construction-related activities. Project construction would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec is considered safe and would not result in any construction vibration damage.

Table 3, Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in **Table 3**, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity. The nearest sensitive receptors are the residential uses to the north, located adjacent to the Project site. As shown in **Table 3**, at 25 feet, construction equipment vibration velocities would not exceed 0.089 in/sec PPV, which is below the FTA's 0.20 PPV threshold. It is also acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest residential structure. Therefore, vibration impacts associated with the proposed Project would be less than significant.

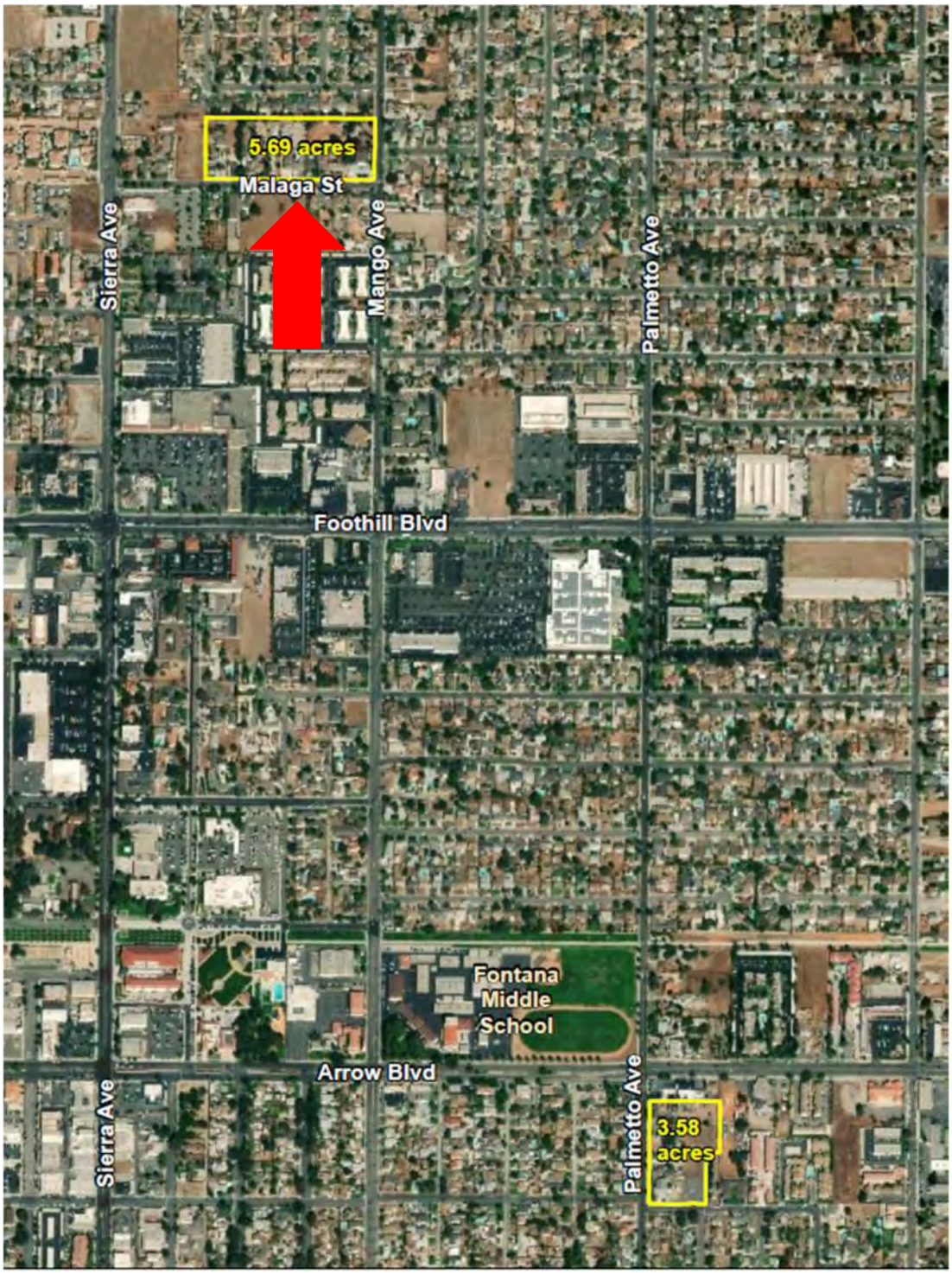
Table 3: Typical Construction Equipment Vibration Levels	
Equipment	**Peak Particle Velocity at 25 Feet (in/sec)**
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Rock Breaker	0.059
Jackhammer	0.035
Small Bulldozer/Tractors	0.003
Notes: 1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018; D = the distance from the equipment to the receiver.	
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.	

Conclusion

Project implementation would result in less than significant short- and long-term noise impacts. No mitigation measures would be required. Therefore, the proposed project would not result in significant effects related to Section 15332(d) of the State CEQA Guidelines.

Kimley»Horn

Exhibit 1 - Project Location



Kimley»Horn

MEMORANDUM

To:	Kari Cano
From:	Alex Pohlman
	Kimley-Horn and Associates, Inc.
Date:	June 2, 2020
Subject:	Palmetto Replacement Site: Proposed Sierra Casa Grande Warehouse Residential Replacement Site – Noise Impacts

---

Purpose

The purpose of this memorandum is to identify noise impacts associated with the proposed residential replacement site located on the northeast corner of Palmetto Avenue and Valencia Avenue (Palmetto Replacement Site) in the City of Fontana. Specifically, this analysis addresses the air quality impacts referenced in State CEQA Guidelines.

Project Description

The project is proposing residential replacement sites for the development of residential dwelling units at two project sites within the City of Fontana in efforts to account for the potential residential dwelling units lost with the development of the proposed Sierra Avenue at Casa Grande Drive Warehouse. The two replacement sites are proposed within the City of Fontana and are shown on Exhibit 1. One replacement site is located on the northeast corner of the intersection of Palmetto Avenue at Valencia Avenue. The site is currently 3.58 acres and occupied by 8 existing residential dwelling units and a church building. The other replacement site, located on the northwest corner of the intersection of Mango Avenue at Malaga Street (Mango Replacement site), is mentioned in this memorandum yet analyzed in a separate document.

The replacement of residential land uses due to the development of the Sierra Avenue at Casa Grande Drive Warehouse would result in the development of a maximum of 219 new residential dwelling units, in addition to the existing units on each site. The 219 dwelling units would be split proportionally between the two replacement sites as follows:

- **Palmetto Avenue/Arrow Boulevard Site**: 24 new dwelling units
  - 8 existing dwelling units
  - 32 onsite total dwelling units

  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

- **Malaga Street/Mango Avenue Site**: 195 new dwelling units
  - 14 existing dwelling units
  - 209 onsite total dwelling units
  - Proposed Residential Designation: R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

Noise Background

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of various distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise as well as the time of day when the noise occurs. For example, the equivalent continuous sound level (L_{eq}) is the average acoustic energy content of noise for a stated period of time; thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. The Day-Night Sound level (L_{dn}) is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 PM to 7:00 AM to account for noise sensitivity in the nighttime. The Community Noise Equivalent Level (CNEL) is a 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 PM to 7:00 AM and an additional 5 dBA weighting during the hours of 7:00 PM to 10:00 PM to account for noise sensitivity in the evening and nighttime.

Regulatory Setting

City of Fontana General Plan

The City of Fontana General Plan Noise and Safety Element (Noise Element) ensures that development accounts for physical constraints and the natural hazards of the land. The noise component of the General Plan identifies potential noise problems and exposure in the community and provides an integrated approach to regulating noise. The City currently regulates noise levels and exposure, consistent, consistent with this Plan, in the Zoning and Development Code.

Goal 8: The City of Fontana protects sensitive land uses from excessive noise by diligent planning through 2035.

Policy 8.1: New sensitive land uses shall be prohibited in incompatible areas.

Policy 8.2: Noise-tolerant land uses shall be guided into areas irrevocable committed to land uses that are noise-producing, such as transportation corridors.

Policy 8.3: Where sensitive uses are to be placed along transportation routes, mitigation shall be provided to ensure compliance with state-mandated noise levels.

Policy 8.4: Noise spillover or encroachment from commercial, industrial and educational land uses shall be minimized into adjoining residential neighborhoods or noise-sensitive users.

Goal 9: The City of Fontana provides a diverse and efficiently operated ground transportation system that generates the minimum feasible noise on its residents through 2035.

Policy 9.1: All noise sections of the State Motor Vehicle Code shall be enforced.

Policy 9.2: Roads shall be maintained such that paving is in good condition and free of cracks, bumps, and potholes.

Policy 9.3: Noise mitigation shall be included in the design of new roadway projects in the city.

Goal 10: Fontana's residents are protected from the negative effects of "spillover" noise.

Policy 10.1: Residential land uses and areas identified noise-sensitive shall be protected fro excessive noise from non-transportation sources including industrial, commercial, and residential activities and equipment.

City of Fontana Municipal Code

Chapter 18, Article II. Section 18-63. – Prohibited Noises

(b) The following acts, which create loud, excessive, impulsive or intrusive sound or noise that annoys or disturbs persons of ordinary sensibilities from a distance of 50 feet or more from the edge of the property, structure or unit in which the source is located, are declared to be in violation of this article.

Section 18-63(b)(6) Loading, unloading or opening boxes. The creation of load, excessive or intrusive and excessive noise in connection with loading or unloading of any vehicle or the opening and destruction of bales, boxes, crates and containers.

Section 18-63(b)(7) Construction or repairing of buildings or structures. The erection (including excavating), demolition, alteration or repair of any building or structure other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector, which permit may be granted for a period not to exceed three days or less while the emergency continues and which permit may be renewed for periods of three days or less while the emergency continues. If the building inspector should determine that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or structure or the excavation of streets and highways within the hours of 6:00 p.m. and 7:00 a.m., and if he shall further determine that loss or inconvenience would result to any party in interest, he may grant permission for such work to be done on weekdays within the hours of 6:00 p.m. and 7:00 a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work.

Section 18-63(b)(8) Noise near schools, courts, place of worship or hospitals. The creation of any loud, excessive, impulsive or intrusive noise on any street adjacent to any school, institution of learning, places of worship or court while the premises are in use, or adjacent to any hospital which unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital; provided conspicuous signs are displayed in such streets indicating that the street is a school, hospital or court street.

Chapter 30, Article V. Division 6, Sec. 30-182. - Noise

(a) No use shall create or cause to be created any sound that exceeds the ambient noise standards outlined in Table 30-182.A (**Table 1, Noise Standards**)

(b) No use shall create or cause creation of noise from a portable electronic device such as a car stereo, portable radio and/or cassette/compact disc player or similar device which exceeds the ambient noise standards outlined in Table 30-182.A (**Table 1**)

Table 1: Noise Standards		
Location of Measurement	**Maximum Allowable**	
All Zoning Districts	**7:00 a.m. to 10:00 p.m.**	**10:00 p.m. to 7:00 a.m.**
Interior	45 db	45 db
Exterior	65 db	65 db
Source: Fontana Municipal Code, Chapter 30, Article V. Division 6, Sec. 30-182. – Noise, Table 30-469		

Chapter 30, Article V. Division 6, Sec. 30-183. - Vibration

No use shall create or cause to be created any activity that causes a vibration that can be felt beyond the property line with or without the aid of an instrument.

Chapter 30, Article VII. Division 6, Sec. 30-259. - Vibration
(a) Noise levels. No person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property: (1) The noise level between 7:00 a.m. and 10:00 p.m. shall not exceed 70 db(A). (2) The noise level between 10:00 p.m. and 7:00 a.m. shall not exceed 65 db(A).

(b) Noise measurements. Noise shall be measured with a sound level meter that meets the standards of the American National Standards Institute (ANSI) Section SI4-1979, Type 1 or Type 2. Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (reference pressure = 20 micronewtons per meter squared).

(c) Vibration. No person shall create or cause to be created any activity which causes a vibration which can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument.

Significance Criteria

Criteria for determining the significance of noise impacts were developed based on information contained in the Fontana General Plan and Fontana Municipal Code. A significant impact related to noise would occur if:

- Project construction activities occur outside the hours that construction noise is considered exempt as specified in the City of Fontana Municipal Code, Section 18-63(7), 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays
    - and Project construction noise levels would exceed the exterior 65 dBA noise level standard
    - and the Project creates a community noise level increase of greater than 3 dBA L_{eq}.

- Off-site traffic noise levels, without or with the Project at existing or future noise-sensitive land uses exceed the City of Fontana General Plan noise standard of 65 dBA CNEL and the Project creates a community noise level increase of greater than 3 dBA CNEL.

- Project construction vibration levels exceed the Caltrans human annoyance vibration threshold of 0.2 in/sec PPV at adjacent uses (Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual). The FTA threshold is used to quantify

potential impacts related to perception of short-term construction-related vibration levels.

Noise Impacts

Construction Noise

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods near the construction site.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities would require concrete/industrial saws, excavators, and dozers during demolition, tractors and dozers during site preparation; graders, dozers, excavators, and tractors during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are listed in **Table 2: Typical Construction Noise Levels**. It should be noted that the noise levels shown in **Table 2** are maximum noise levels (i.e., the equipment engine at maximum speed). However, equipment used on construction sites typically operates under less than full power conditions, or part power.

Noise-sensitive uses closest to the project site include residences to west on the opposite side of Palmetto Avenue. As shown in **Table 2**, construction noise levels would range from approximately 76 dBA to 85 dBA at a distance of 50 feet. As such, noise levels at the residences to the west of the project site could exceed ambient noise levels and may cause periodic disturbance during the construction period. However, Section 18-63(7) exempts construction noise between the hours of 7:00 a.m. to 6:00 p.m. on weekdays and between the hours of 8:00 a.m. to 5:00 p.m. on Saturdays. Construction activities for the proposed Project would only occur during the time period specified in the Municipal Code. Additionally, construction noise from the project would be acoustically dispersed throughout the project site (depending on what construction phase or activity is occurring) and not concentrated in one area near surrounding uses for an extended period of time. As such, construction-related noise impacts would be less than significant in this regard.

Table 2: Typical Construction Noise Levels	
Equipment	**Typical Noise Level (dBA L_{max}) at 50 feet from Source**
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84
dBA = A-weighted decibel; L_{max} = maximum A-weighted sound level	
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.	

Operational Noise

Implementation of the proposed project would result in noise sources typical of residential developments in the area. The major noise sources associated with the project would include off-site traffic noise. The nearest sensitive receptors to the project site are the residences to west on the opposite side of Palmetto Avenue.

Project implementation would generate increased traffic volumes along Palmetto Avenue and Project area roadways. According to the trip generation analysis, the Project would result in an additional 520 average daily vehicle trips. The Project's increase in traffic would result in noise increases on Project area roadways. In general, a 3-dBA increase in traffic noise is barely perceptible to people, while a 5-dBA increase is readily noticeable. Traffic volumes on Project area roadways would have to approximately double for the resulting traffic noise levels to generate a 3-dBA increase[1]. According to the Background Report identified as Appendix 1 of the Fontana General Plan, the daily average daily

[1] According to the California Department of Transportation, *Technical Noise Supplement to Traffic Noise Analysis Protocol* (September 2013), it takes a doubling of traffic to create a noticeable (i.e., 3 dBA) noise increase

traffic along Palmetto Avenue (between Arrow Boulevard and Orange Way) is 8,500 vehicles[2]. Therefore, because the increase of 520 daily trips generated by the proposed Project is not enough to double the number of trips along Palmetto Avenue, the Project would not generate sufficient traffic to result in a permanent 3-dBA increase in ambient noise levels. Noise impacts associated with traffic would be less than significant.

Vibration Impacts

Increases in groundborne vibration levels attributable to the project would be primarily associated with short-term construction-related activities. Project construction would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec is considered safe and would not result in any construction vibration damage.

Table 3, Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in **Table 3**, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity. The nearest sensitive receptors are the residential uses to the west, located adjacent to the Project site. As shown in **Table 3**, at 25 feet, construction equipment vibration velocities would not exceed 0.089 in/sec PPV, which is below the FTA's 0.20 PPV threshold. It is also acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest residential structure. Therefore, vibration impacts associated with the proposed Project would be less than significant.

[2] City of Fontana, *Fontana General Plan Update: Background Report*, November 13, 2018

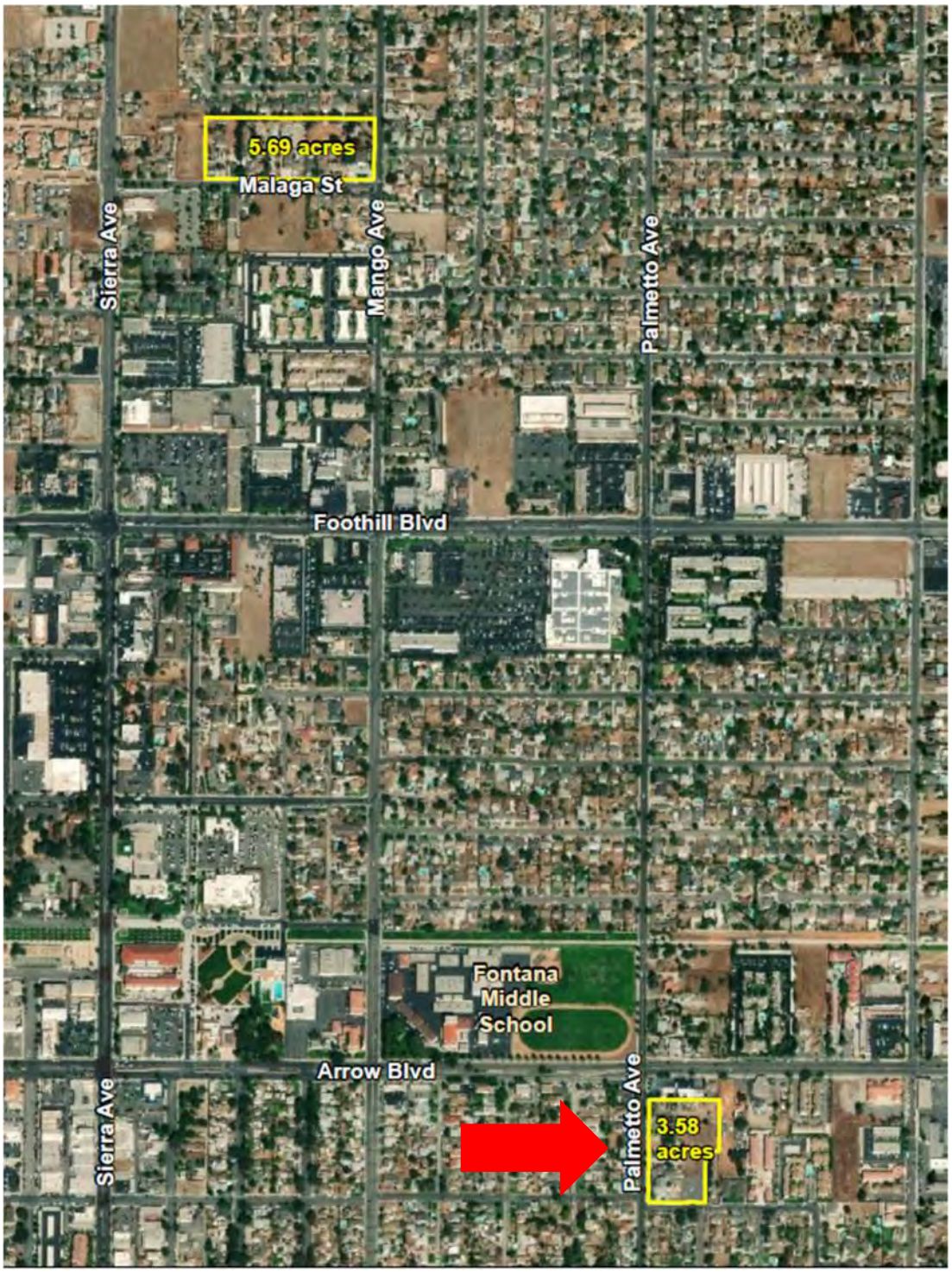
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Large Bulldozer	0.089
Caisson Drilling	0.089
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Rock Breaker	0.059
Jackhammer	0.035
Small Bulldozer/Tractors	0.003
Notes: 1. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018; D = the distance from the equipment to the receiver.	
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.	

Conclusion

Project implementation would result in less than significant short- and long-term noise impacts. No mitigation measures would be required. Therefore, the proposed project would not result in significant effects related to Section 15332(d) of the State CEQA Guidelines.

Kimley»Horn

Exhibit 1 - Project Location



Appendix H

Traffic Impact Study;

Traffic Memorandum - Mango Ave Replacement Site; and

Traffic Memorandum - Palmetto Ave Replacement Site

TRAFFIC IMPACT STUDY
FOR THE PROPOSED
SIERRA AND CASA GRANDE WAREHOUSE
IN THE CITY OF FONTANA

Prepared by:

Kimley-Horn and Associates, Inc.
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May, 2020

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TRAFFIC IMPACT STUDY
FOR THE PROPOSED
SIERRA AND CASA GRANDE WAREHOUSE
IN THE CITY OF FONTANA

INTRODUCTION

Purpose and Study Objectives

This traffic impact study has been prepared to address the traffic-related impacts of the proposed Sierra and Casa Grande Warehouse project in the City of Fontana. This traffic study has been conducted in accordance with the traffic study requirements of the City of Fontana and San Bernardino Association of Governments (SANBAG) Congestion Management Program (CMP).

This report includes a description of existing traffic conditions in the surrounding area, estimated project trip generation and distribution, future traffic growth, and an assessment of project-related impacts on the roadway system. Where necessary, circulation system improvements have been identified to mitigate significant project impacts at the study locations.

Project Overview

The project is located on the northeast corner of the future intersection of Sierra Avenue and Casa Grande Drive, in the northern area of the City of Fontana. The project site is shown in its regional setting on Figure 1. The project site (approximately 15.2 acres) is currently bounded by vacant land to the north and south, Sierra Avenue to the west, and single-family residential uses to the east.

The project consists of the construction of a 332,996 square-foot warehouse with 134 parking stalls, 67 trailer parking stalls as well as 35 loading docks. A copy of the project site plan is provided on Figure 2.

Vehicular access for the project site would be via two full-movement driveways on Sierra Avenue, one right-in/right-out driveway and one full-movement driveway on Casa Grande Drive. All four project driveways would be unsignalized. Passenger vehicles would access the project site via the two driveways on the Sierra Avenue and trucks would access the project site via the two driveways on Casa Grande Drive.

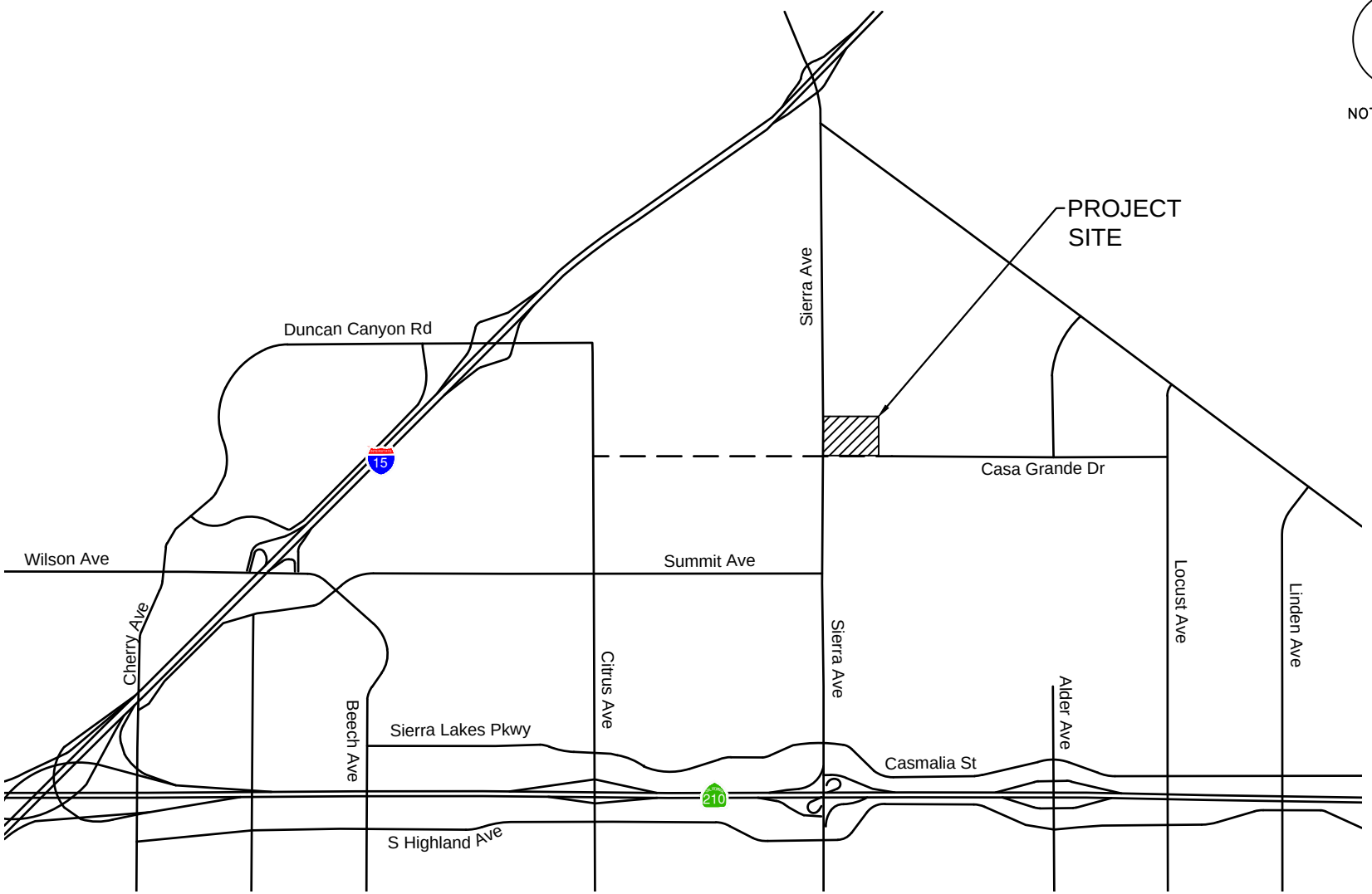
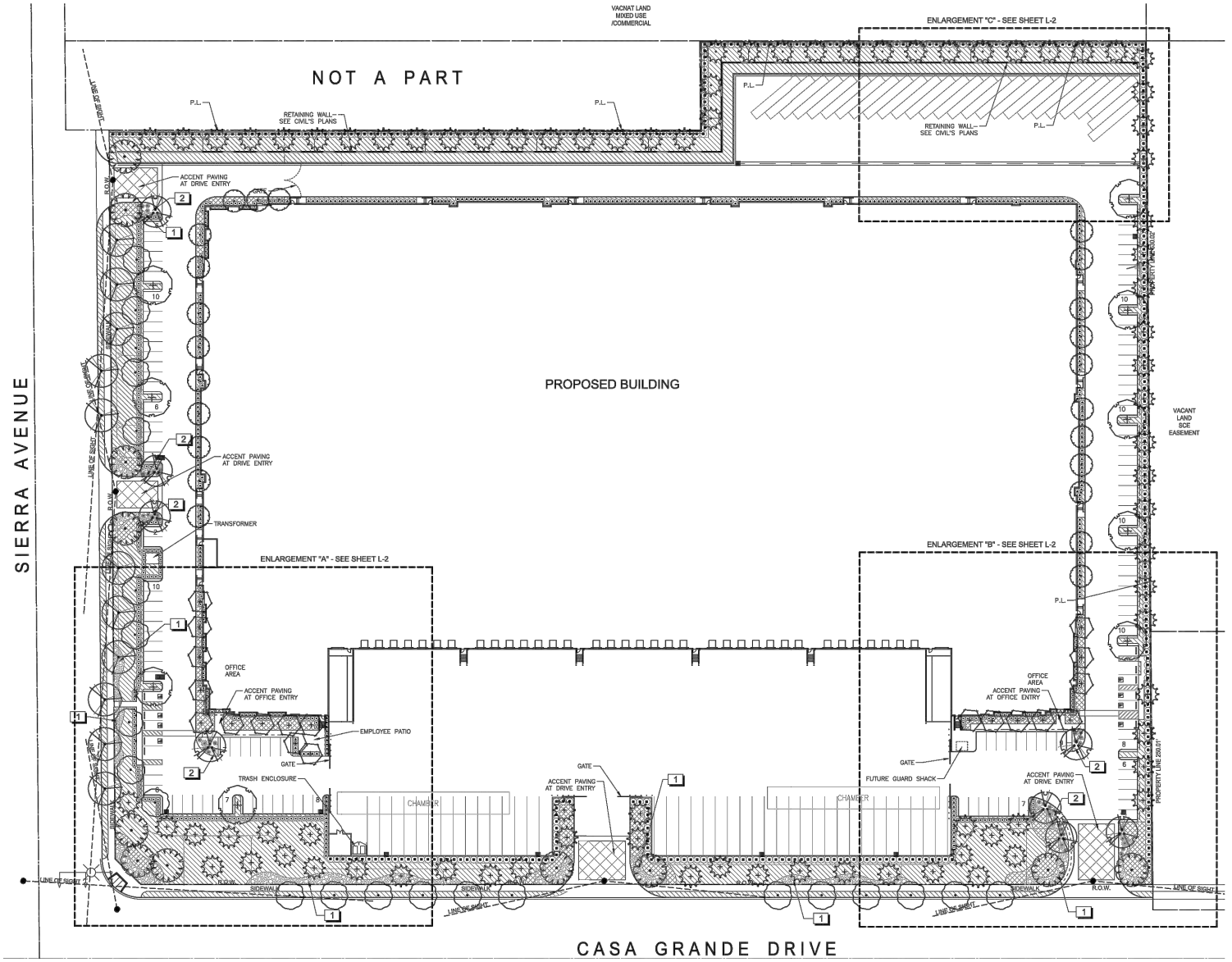


FIGURE 1
VICINITY MAP

Kimley»Horn



NOT TO SCALE

FIGURE 2
PROJECT SITE PLAN

Kimley»Horn

ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

Based on the City of Fontana's Traffic Impact Analysis (TIA) guidelines, the project will be evaluated in the morning and evening peak hours for the following conditions:

- Existing Conditions
- Existing Plus Project
- Project Opening Year 2021
- Project Opening Year 2021 Plus Project
- Horizon Year 2040
- Horizon Year 2040 Plus Project

Intersection Analysis – HCM Methodology

This study includes evaluation of morning and evening peak hour operations at two existing intersections, one future intersection, and the project site driveways, located in the City of Fontana.

Peak hour intersection operations at signalized and unsignalized intersections were evaluated using the methods prescribed in the current Highway Capacity Manual (HCM) 6th edition, consistent with the requirements of the 2016 San Bernardino County CMP.

The City of Fontana's TIA guidelines require analysis of traffic operations to be based on the vehicular delay methodologies of the HCM (Transportation Research Board Special Report 209). The City does not designate a specific software to be used in the analysis but allows the use of one of several software packages that are consistent with the HCM methodologies. The intersection analysis for the proposed project has been accomplished using the Vistro software program and using the specified input parameters outlined in the San Bernardino County CMP.

Per the HCM Methodology, Level of Service (LOS) for signalized intersections is defined in terms of average vehicle delay. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay. The tables on the following page provide a description of the operating characteristics of each Level of Service and define the LOS in terms of average seconds of delay for signalized and unsignalized intersections.

LEVEL OF SERVICE DEFINITIONS	
Level of Service	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service	Signalized Intersection (Average delay per vehicle, in seconds) [1]	Unsignalized Intersections (Average delay per vehicle, in seconds) [2]
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

[1] Source: Highway Capacity Manual (HCM 6th Edition), Exhibit 18-4.

[2] Source: Highway Capacity Manual (HCM 6th Edition), Exhibits 19-1 and 20-2.

Level of Service Standards and Measure of Significance

The Level of Service standard in the City of Fontana for an intersection is LOS C or better. According to the City of Fontana's TIA guidelines, a significant traffic impact would occur when the project causes the Level of Service to fall below LOS C, or causes the peak hour delay to increase as follows:

- LOS A/B – by 10.0 seconds
- LOS C – by 8.0 seconds
- LOS D – by 5.0 seconds
- LOS E – by 2.0 seconds
- LOS F – by 1.0 second

AREA CONDITIONS

Study Area

This traffic study includes documentation of existing conditions, future conditions, and identification of project-related impacts at the following study intersections:

1. Sierra Avenue at Casa Grande Drive (future intersection)
2. Sierra Avenue at SR-210 Westbound Ramp
3. Sierra Avenue at SR-210 Eastbound Ramp

The study locations were established in consultation with City of Fontana staff through the Scoping Letter Agreement process. A copy of the approved Scoping Letter Agreement is provided in *Appendix A*.

Existing Street System

Regional access to the site is provided primarily by the Foothill Freeway (SR-210). Access to the SR-210 Freeway via Sierra Avenue is located approximately 1.5 miles south of the project site. Another facility that provides regional access to the site includes the Interstate 15 (I-15) Freeway, with access to the freeway located approximately 3 miles to the west of the project site.

Existing lane configurations and intersection controls at the study intersections are shown on Figure 3. A copy of the City of Fontana's Hierarchy of Streets Plan is provided on Figure 4. The following provides a description of the roadways surrounding the project site.

Sierra Avenue – Sierra Avenue is a two-lane undivided roadway north of Summit Avenue, and a five-to-six-lane divided roadway south of Summit Avenue. Throughout the entire roadway within the study area, Sierra Avenue has left-turn lanes at arterial intersections. On-street parking on Sierra Avenue is not allowed. Sierra Avenue forms the western boundary of the project site and would provide passenger vehicle access to the site via two full-movement driveways. Sierra Avenue is designated as a Major Divided Highway on the City of Fontana Circulation Master Plan, which would

provide six travel lanes and a median with left turn pockets approaching intersections. This would ultimately only allow right-in/right-out driveways to the project along Sierra Avenue with the Horizon Year conditions.

Casa Grande Drive – Casa Grande Drive is a four-lane undivided roadway through the study area with bike lanes in both directions. On-street parking on Casa Grande Drive is not allowed. Casa Grande Drive will form the southern boundary of the project site and would provide truck access to the site via one western, right-in/right-out driveway and one eastern, full-movement driveway.

Transit Service

Transit service to the project area is provided via the OmniTrans transit lines, which serve many San Bernardino cities in the area. The closest bus stop in the project vicinity is at the intersection of Sierra Avenue at Sierra Lakes Parkway, approximately 1 ¼ mile south of the project site. A description of the bus route serving the project area is provided below.

Route 82 operates between the City of Fontana and the City of Rancho Cucamonga, traveling through Fontana along Sierra Avenue and Jurupa Avenue. Route 82 operates on weekdays from approximately 4:30 AM to 10:15 PM with approximately 15-minute headways (the time between bus arrivals), on Saturdays from approximately 6:15 AM to 7:30 PM with approximately 30-minute headways, and on Sundays from approximately 6:15 AM to 7:10 PM with approximately 30-minute headways.

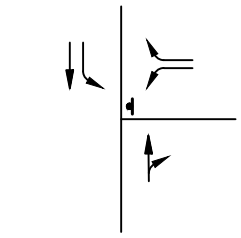
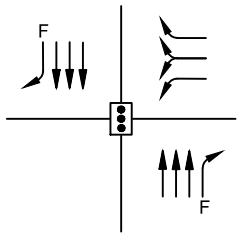
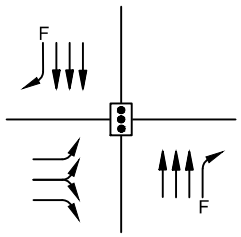
Existing Traffic Volumes

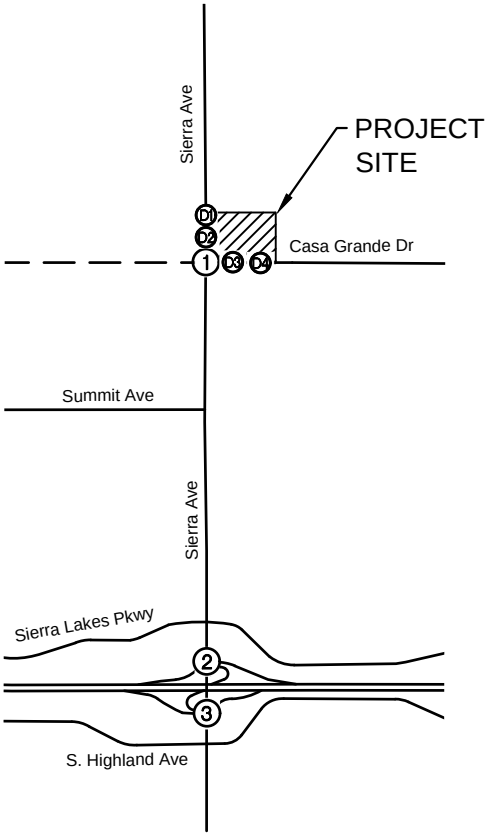
Existing morning and evening peak hour turning movement volumes and daily roadway volumes were collected on a typical weekday in September, 2019. The study intersection of Sierra Avenue at Casa Grande Drive is a future intersection. Volumes at this intersection were estimated based on existing daily roadway volumes. This intersection will be analyzed for Existing Plus Project and Future scenarios. Existing morning and evening peak hour volumes are presented on Figure 5. Peak hour intersection traffic count worksheets and daily roadway volume worksheets are provided in *Appendix B*.

Existing Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on Table 1. Copies of Existing Conditions intersection analysis worksheets are provided in *Appendix C*. Review of this table indicates that the all study intersections currently operate at an acceptable Level of Service under Existing Conditions.

NOT TO SCALE

1. Sierra Ave* at Casa Grande Dr	2. Sierra Ave at SR-210 WB Ramp	3. Sierra Ave at SR-210 EB Ramp
		



D1. Sierra Ave at North Dwy	D2. Sierra Ave at South Dwy	D3. Casa Grande Dr at West Dwy	D4. Casa Grande Dr at East Dwy
FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION

* Sierra Avenue at Casa Grande Drive is a future intersection. Lane configuration and traffic control are assumed for Existing Plus Project conditions.

LEGEND:
- (X) = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- F = Free Right-Turn

FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

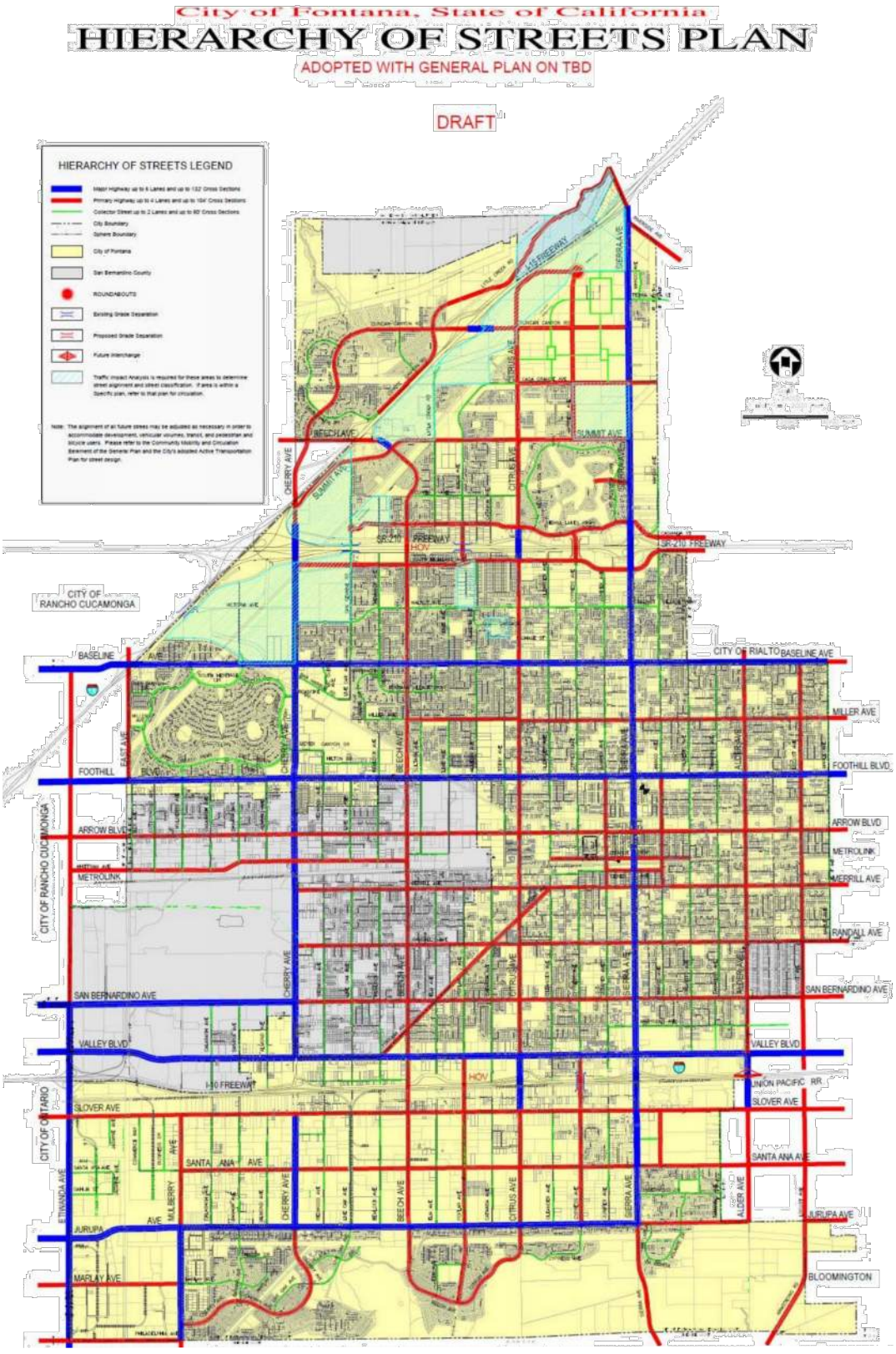
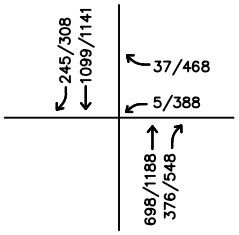
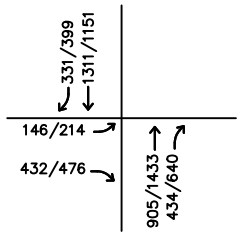


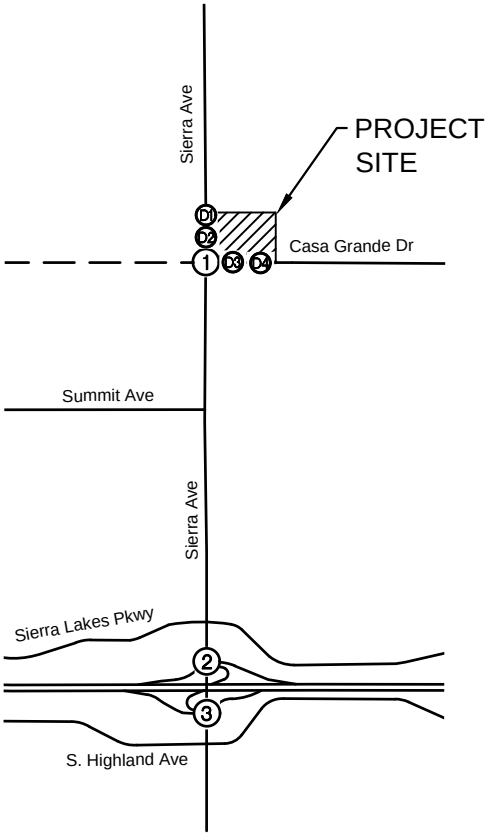
FIGURE 4
CITY OF FONTANA
HIERARCHY OF STREETS PLAN

NOT TO SCALE

1. Sierra Ave at Casa Grande Dr
FUTURE INTERSECTION

2. Sierra Ave at SR-210 WB Ramp


3. Sierra Ave at SR-210 EB Ramp




D1. Sierra Ave at North Dwy	D2. Sierra Ave at South Dwy	D3. Casa Grande Dr at West Dwy	D4. Casa Grande Dr at East Dwy
FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 5
EXISTING TRAFFIC VOLUMES

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Sierra Avenue at Casa Grande Drive	Future Intersection				
2	Sierra Avenue at SR-210 WB Ramp	S	7.3	A	16.2	B
3	Sierra Avenue at SR-210 EB Ramp	S	13.3	B	14.3	B

Notes:

- Bold and shaded values indicate intersections operating at an unacceptable Level of Service, or a significant impact to the intersection, per City standards.

- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

- At an unsignalized intersection, delay refers to the average delay per vehicle on the intersection approach with the highest delay.

- Delay values are based on the methodology outlined in the Highway Capacity Manual (6th Edition).

- S = Signalized

PROJECT TRAFFIC

Project Trip Generation

Trip generation estimates for the project are based on daily and peak hourly trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). ITE trip generation estimates for the project are based on the trip generation rate for the following ITE Land Use: Warehousing (Land Use 150).

Passenger vehicle and truck mix assumptions for the project were derived from the City of Fontana TIA Guidelines, which indicate that truck trips for a warehouse use make up approximately 20.43% of the project trips on a daily basis.

The Fontana study specifies a truck mix of approximately 17% of the trucks being 2-axle, 23% 3-axle, and 60% 4+-axle. These vehicle classification splits were applied to the daily and peak hour trip generation to develop an estimate of truck volumes by number of axles that would be associated with the proposed project.

Passenger car equivalent (PCE) factors were then applied to the truck types, based on number of axles (2.0 PCE for 2-axle trucks, 2.5 PCE for 3-axle trucks, and 3.0 PCE for 4+-axle trucks) to determine the total PCE volumes to be generated by the project.

The trip generation rates, truck mix, PCE factors, and the resulting trip generation estimates for the project are summarized on Table 2. With the PCE factors, the project is estimated to generate 782 PCE trips on a daily basis, with 77 PCE trips in the morning peak hour, and 85 PCE trips in the evening peak hour.

Trip Distribution and Assignment

Project trip distribution assumptions for the project site were developed based on existing traffic patterns and the likely origins and destinations of employees and trucks. Trip distribution assumptions for passenger cars and trucks are shown on Figure 6. Based on the trip distribution and assignment assumptions, the new trips to be added to the street system by the proposed project were calculated and are shown on Figure 7.

TABLE 2
SUMMARY OF PROJECT TRIP GENERATION
SIERRA AND CASA GRANDE WAREHOUSE

TRIP GENERATION RATES

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.740	0.131	0.039	0.170	0.051	0.139	0.190

PROJECT TRIP GENERATION

Project Land Use		Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		332.996	KSF	579	44	13	57	17	46	63
Passenger Vehicles	79.57%			461	35	10	45	14	37	51
Trucks	20.43%			118	9	3	12	3	9	12

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix [1]	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	79.57%	461	1.0	461	35	10	45	14	37	51
2-Axle Trucks	3.46%	20	2.0	40	3	1	4	1	3	4
3-Axle Trucks	4.64%	27	2.5	68	5	2	7	2	5	7
4+ Axle Trucks	12.33%	71	3.0	213	16	5	21	6	17	23
Total Truck PCE Trips				321	24	8	32	9	25	34
Total Project PCE Trips				782	59	18	77	23	62	85

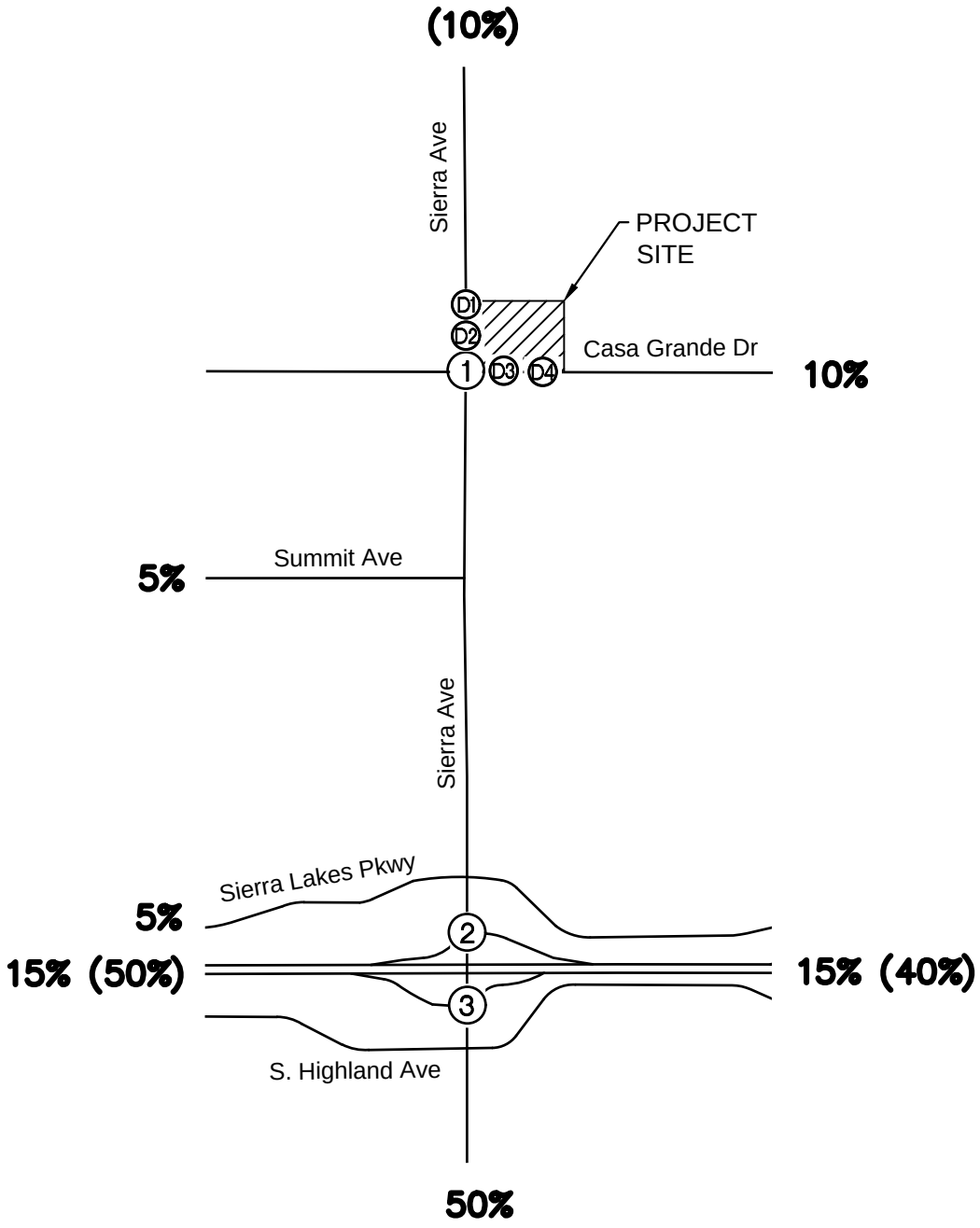
Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

[1] Source: Truck Trip Generation Study - City of Fontana, August 2003

NOT TO SCALE



LEGEND:

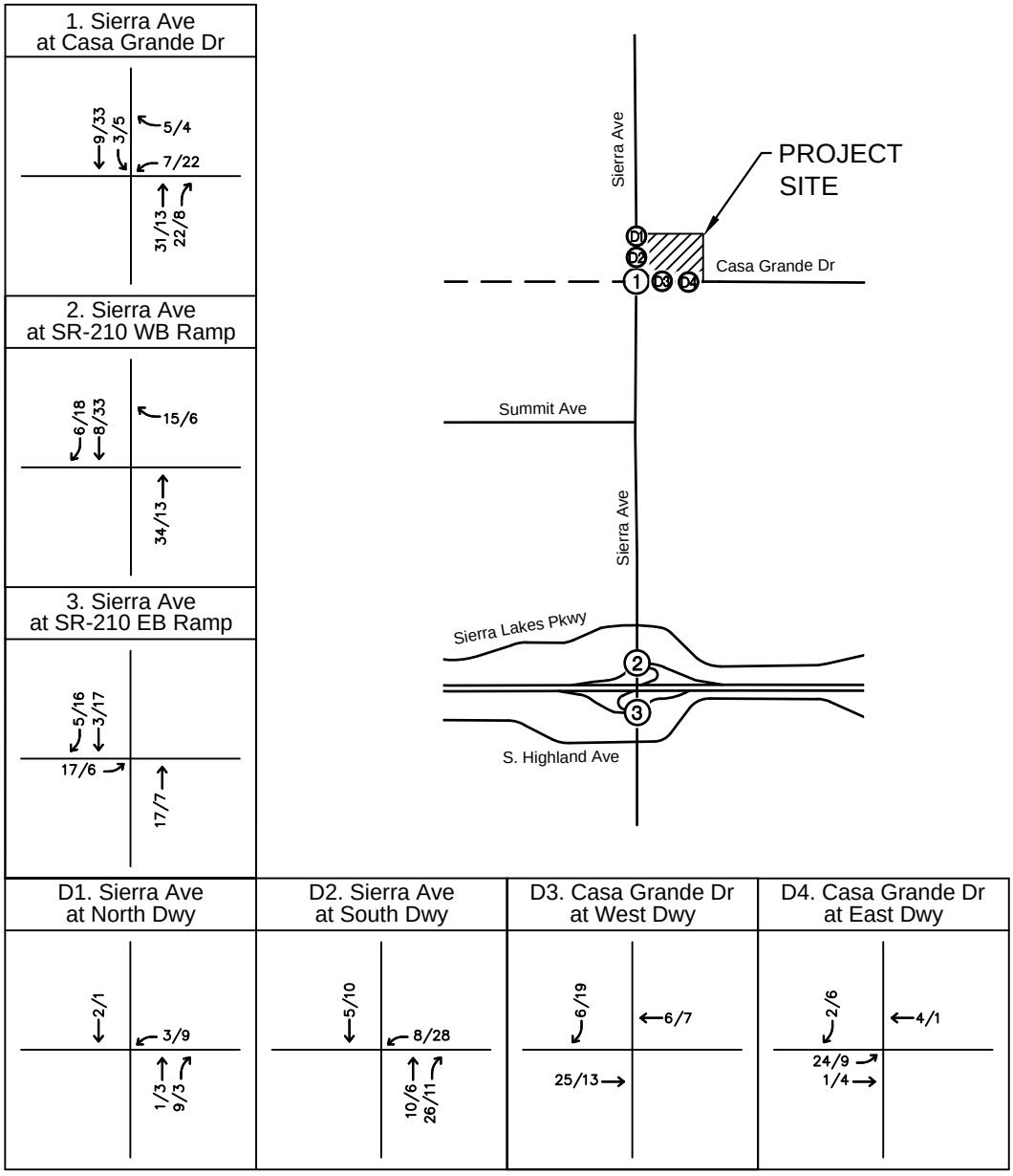
(X) = Study Intersection

XX% = Passenger Car Trip Distribution Percentage

(YY%) = Truck Trip Distribution Percentage

FIGURE 6
PROJECT TRIP DISTRIBUTION

NOT TO SCALE



* Project trips in Horizon Year scenarios re-route to accommodate right-in/right-out operations at D1 and D2.

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 7
PROJECT-RELATED TRAFFIC VOLUMES

Existing Plus Project Conditions

Project-related traffic was added to the Existing traffic volumes, and the resulting traffic volumes at the study locations are shown on Figure 8.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Existing Plus Project condition. The results of the intersection analysis are shown on Table 3. Copies of intersection analysis worksheets for this scenario are provided in *Appendix C*.

Review of this table indicates that, with the addition of Project traffic, the following study intersection would operate at an unacceptable Level of Service during the peak hours:

- #1 - Sierra Avenue at Casa Grande Drive: AM – LOS E; PM – LOS E
- D1 – Sierra Avenue at North Driveway: AM – LOS D
- D2 – Sierra Avenue at South Driveway: AM – LOS D; PM – LOS D

The Level of Service for an unsignalized intersection is reported based on the single approach movement with the highest delay, which in this case, would be the westbound approach for intersections #1, D1, and D2. The side street traffic at the unsignalized intersections experience delay during the peak hours while waiting for an acceptable gap in traffic on Sierra Avenue. While the side street approach operates at a deficient Level of Service based on the highest delay approach, the overall intersection delay would be acceptable. Any queuing that occurs on the side street is contained on the minor intersection approach or driveways and does not impact the progression of traffic on the main arterial.

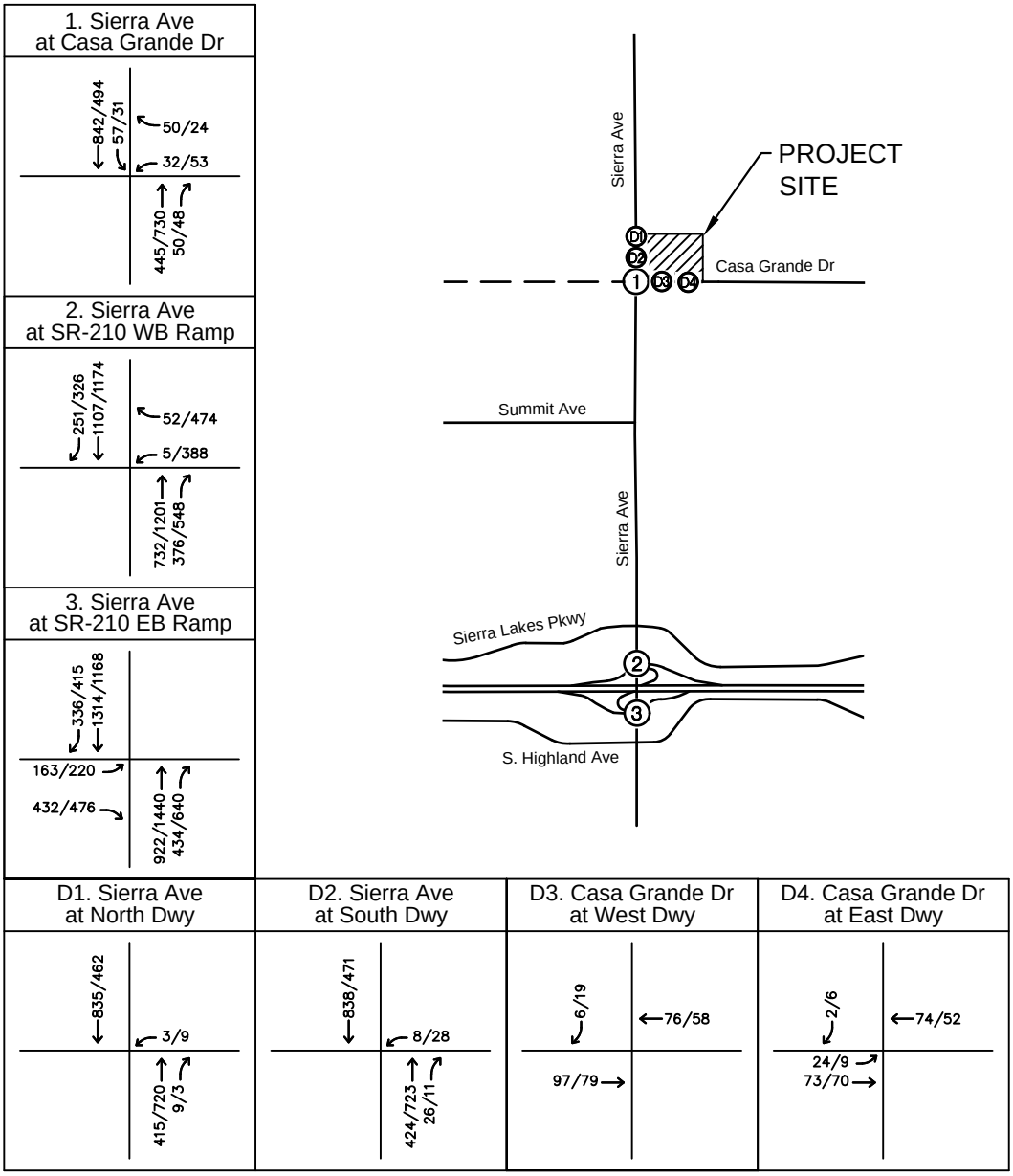
To improve the minor approach delay and access to the project driveways, it is recommended that the developer build half of the roadway width along the project frontage on Sierra Avenue, including two northbound lanes and a two-way left-turn lane (TWLTL). A median on Sierra Avenue along the project frontage is assumed in Horizon Year analyses.

FUTURE CONDITIONS

Project Opening Year 2021 Conditions

The Project Opening Year (the year the project would be constructed and occupied) is anticipated to be Year 2021. Based on consultation with City staff, an ambient growth rate of 2% per year to Project Opening Year 2021 was applied to existing traffic volumes. Cumulative Project traffic was also added to Project Opening Year 2021 volumes and is explained below.

NOT TO SCALE



LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 8
EXISTING PLUS PROJECT TRAFFIC VOLUMES

TABLE 3
SUMMARY OF INTERSECTION OPERATION
EXISTING PLUS PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Project Impact	Impact Sig?	Without Project		With Project		Project Impact	Impact Sig?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Sierra Avenue at Casa Grande Drive	U	-	-	47.2	E	-	-	-	-	45.6	E	-	-
2	Sierra Avenue at SR-210 WB Ramp	S	7.3	A	7.5	A	0.2	No	16.2	B	16.3	B	0.1	No
3	Sierra Avenue at SR-210 EB Ramp	S	13.3	B	13.4	B	0.1	No	14.3	B	14.3	B	0.0	No
D1	Sierra Avenue at North Driveway	U			26.2	D	-	No			24.7	C	-	No
D2	Sierra Avenue at South Driveway	U			27.5	D	-	No			27.7	D	-	No
D3	Casa Grande Drive at West Driveway	U			8.7	A	-	No			8.7	A	-	No
D4	Casa Grande Drive at East Driveway	U			8.7	A	-	No			8.6	A	-	No

Notes:

- Bold and shaded values indicate intersections operating at an unacceptable Level of Service, or a significant impact to the intersection, per City standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At an unsignalized intersection, delay refers to the average delay per vehicle on the intersection approach with the highest delay.
- Delay values are based on the methodology outlined in the Highway Capacity Manual (6th Edition).
- S = Signalized; U = Unsignalized

Cumulative Projects

Information about Cumulative Projects in the area was provided by the City of Fontana. Cumulative Projects consist of any project that has been approved, but is not yet constructed/occupied, and projects that are in various stages of the application and approval process but have not yet been approved. A summary of Cumulative Projects in the project vicinity and the trip generation associated with each is provided on Table 4. The locations of the Cumulative Projects are shown on Figure 9.

Trip Generation

Trip generation information for Cumulative Projects was derived either from approved traffic studies, where available; or developed by Kimley-Horn if approved traffic studies were not available.

Trip Distribution and Assignment

Likewise, trip distribution and assignment for the Cumulative Projects were either derived from approved traffic studies, where available; or were developed by Kimley-Horn if approved traffic studies were not available. Project information and trip distribution assumptions for Cumulative Projects are provided in *Appendix D*.

Ambient growth and Cumulative Project trips were added to existing traffic to develop Project Opening Year 2021 forecasts. The resulting peak hour turning movement volumes at the study locations are shown in Figure 10.

Roadway and Intersection Improvements

Local roadway and intersection improvements have been conditioned on other projects or will be built before the completion of Cumulative Projects. For the Project Opening Year 2021 and Horizon Year 2040 analysis scenarios, the following local intersections improvements are assumed:

- Sierra Avenue and Casa Grande Drive
    - Addition of west leg – one left-turn lane, one thru/right-turn lane
    - Installation of a traffic signal

Project Opening Year 2021 lane configurations and intersection control with the addition of these improvements are shown on Figure 11.

Peak Hour Operating Conditions

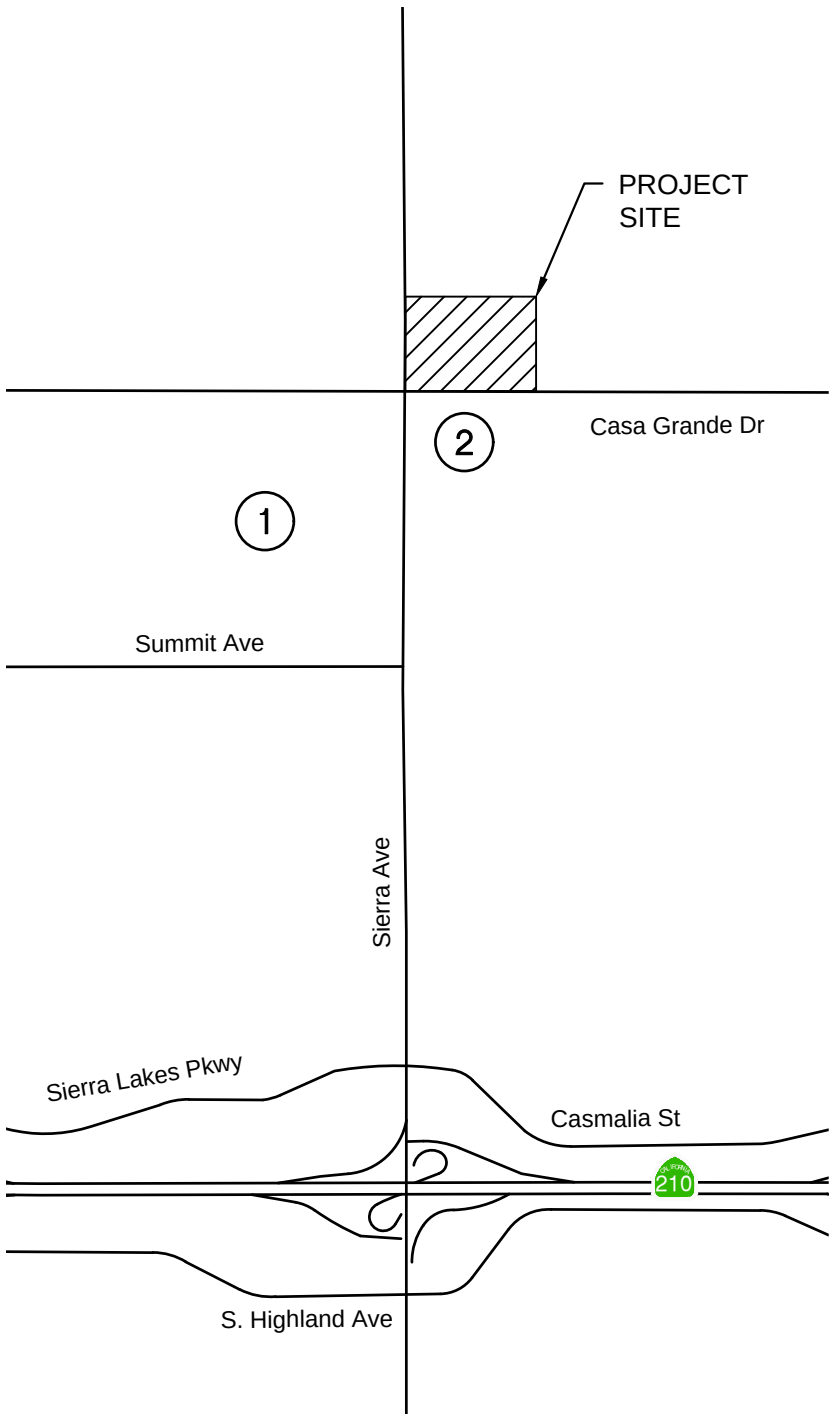
Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Project Opening Year 2021 condition. The results are shown on Table 5. Intersection analysis worksheets for this scenario are provided in *Appendix C*.

Review of this table indicates that, with the addition of background growth and cumulative project traffic, all study intersections would operate at an acceptable Level of Service.

TABLE 4
SUMMARY OF CUMULATIVE PROJECTS

Project #	Land Use	Quantity	Units	Trip Generation Estimates						
					AM Peak Hour			PM Peak Hour		
				Daily	In	Out	Total	In	Out	Total
1	Summit at Rosena									
	Single-Family Detached Housing	856	DU	8,081	158	475	633	534	313	847
	Public Park	28	Acre	22	0	0	0	2	1	3
	Multipurpose Recreational Facility	44.000	KSF	*	*	*	*	87	71	158
	Elementary School	400	Student	756	145	123	268	33	35	68
2	SEC Sierra and Casa Grande - Warehouse	190.000	KSF	747	91	27	118	40	88	128
Total Project Trips				9,614	406	632	1,038	693	460	1,153

DU = Dwelling Units, KSF = 1,000 square feet

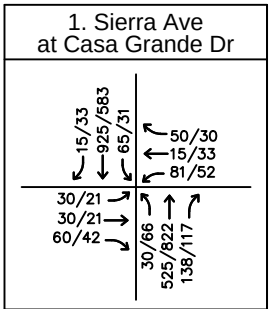


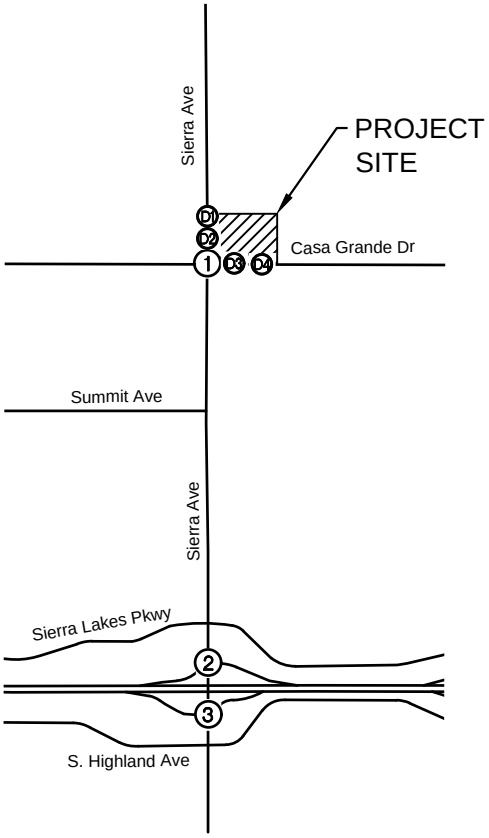
LEGEND:

(X) = Cumulative Project See Appendix D

FIGURE 9
LOCATION OF CUMULATIVE PROJECTS

NOT TO SCALE





D1. Sierra Ave at North Dwy	D2. Sierra Ave at South Dwy	D3. Casa Grande Dr at West Dwy	D4. Casa Grande Dr at East Dwy
FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION

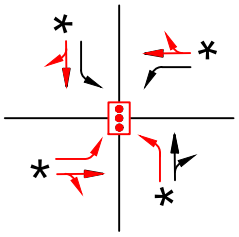
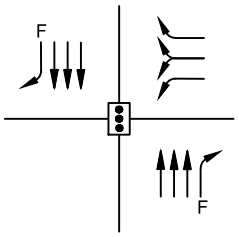
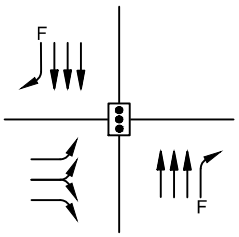
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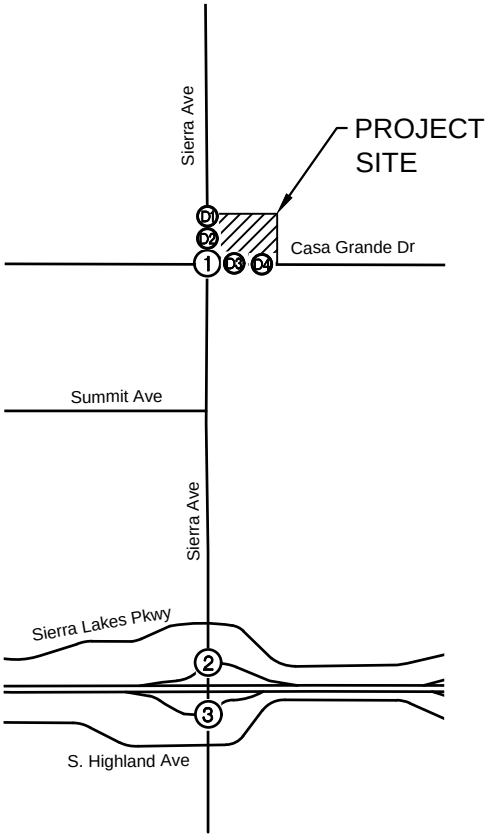
(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 10
PROJECT OPENING YEAR 2021
TRAFFIC VOLUMES

NOT TO SCALE

1. Sierra Ave* at Casa Grande Dr	2. Sierra Ave at SR-210 WB Ramp	3. Sierra Ave at SR-210 EB Ramp
		



D1. Sierra Ave at North Dwy	D2. Sierra Ave at South Dwy	D3. Casa Grande Dr at West Dwy	D4. Casa Grande Dr at East Dwy
FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION

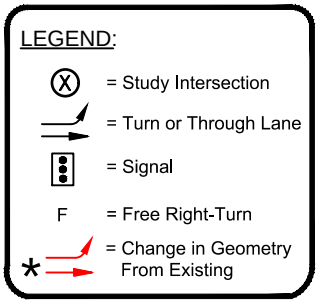


FIGURE 11
PROJECT OPENING YEAR 2021 LANE CONFIGURATION AND TRAFFIC CONTROL

TABLE 5
SUMMARY OF INTERSECTION OPERATION
PROJECT OPENING YEAR 2021

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Sierra Avenue at Casa Grande Drive	S	11.9	B	10.0	A
2	Sierra Avenue at SR-210 WB Ramp	S	8.4	A	17.5	B
3	Sierra Avenue at SR-210 EB Ramp	S	14.0	B	15.7	B

Notes:

- Bold and shaded values indicate intersections operating at an unacceptable Level of Service, or a significant impact to the intersection, per City standards.

- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

- At an unsignalized intersection, delay refers to the average delay per vehicle on the intersection approach with the highest delay.

- Delay values are based on the methodology outlined in the Highway Capacity Manual (6th Edition).

- S = Signalized; U = Unsignalized

FUTURE CONDITIONS WITH PROJECT

Project Opening Year 2021 Plus Project

Project-related traffic was added to the Project Opening Year 2021 traffic volumes, and the resulting peak hour turning movement volumes at the study intersections are shown on Figure 12.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Project Opening Year 2021 Plus Project condition. The results of the intersection analysis are shown on Table 6. Copies of intersection analysis worksheets for this scenario are provided in *Appendix C*.

Review of this table indicates that, with the addition of Project traffic, all study intersections would operate at an acceptable Level of Service.

HORIZON YEAR CONDITIONS

Horizon Year 2040 Conditions

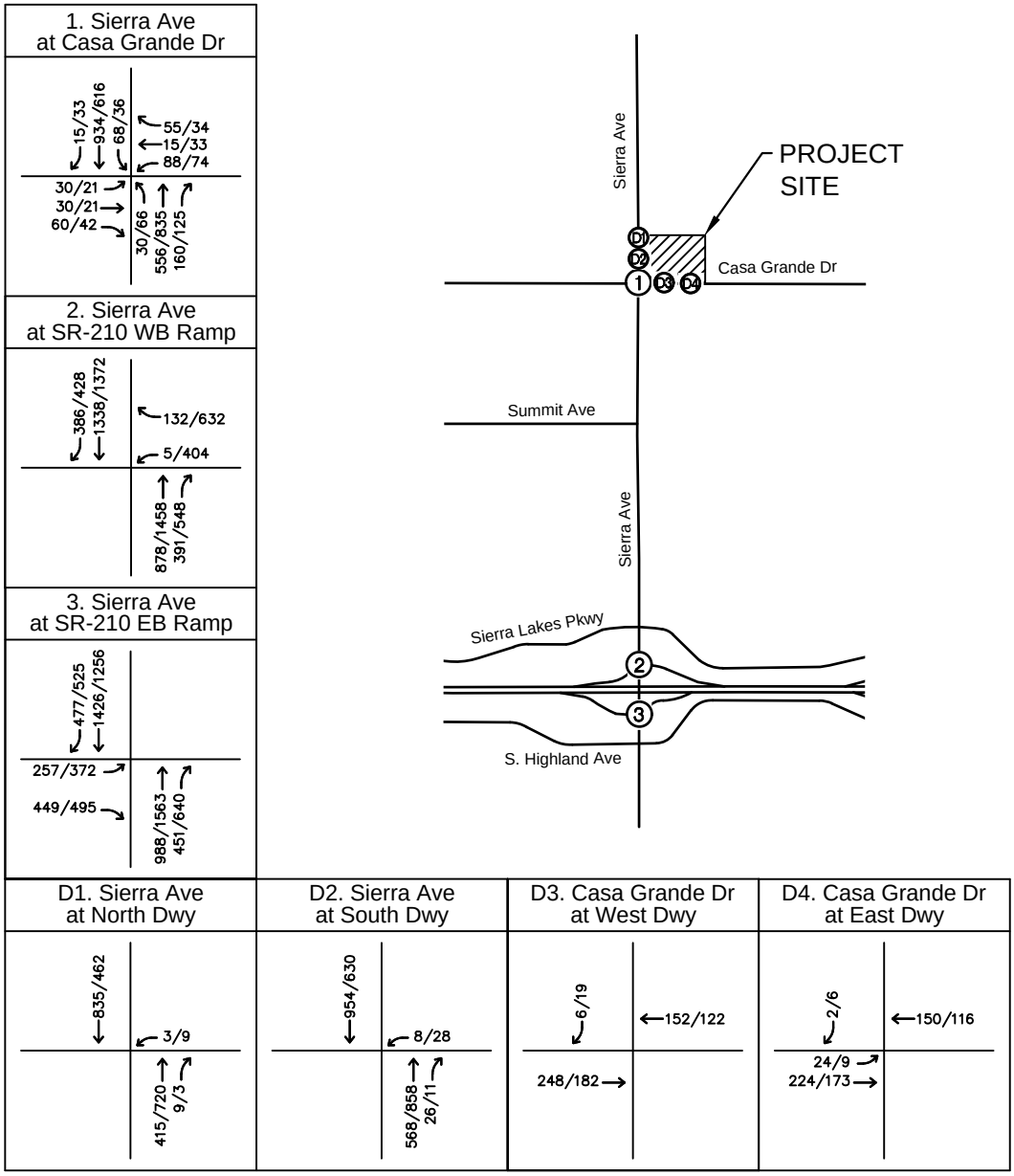
To develop the Horizon Year 2040 intersection turning movement forecasts, the San Bernardino Transportation Analysis Model (SBTAM) Base Year 2012 and Horizon Year 2040 future traffic projections were used. The raw forecasts obtained from the model output were post-processed by determining the annual growth between the base model year and the future model year and applying the resulting growth to existing count volumes. The B-Turns analysis worksheets, developed by the Federal Highway Administration (FHWA), translate the grown volumes into peak hour turning movements. As a conservative approach, if a turning movement volume produced by this model was less than Project Opening Year 2021 volumes for that movement, manual adjustments were made to assure that all forecast Horizon year volumes would be equal to or greater than the Project Opening Year 2021 turning movement volumes. Both SBTAM Model plots and B-Turns analysis worksheets are provided in *Appendix E.* The resulting traffic volumes for Horizon Year 2040 condition are shown on Figure 13.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Horizon Year 2040 condition. The results of the intersection analysis are shown on Table 7. Copies of intersection analysis worksheets for this scenario are provided in *Appendix C*.

Review of this table indicates that under Horizon Year 2040 conditions, the study intersections would operate at an acceptable Level of Service.

NOT TO SCALE



LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 12
PROJECT OPENING YEAR 2021 PLUS PROJECT TRAFFIC VOLUMES

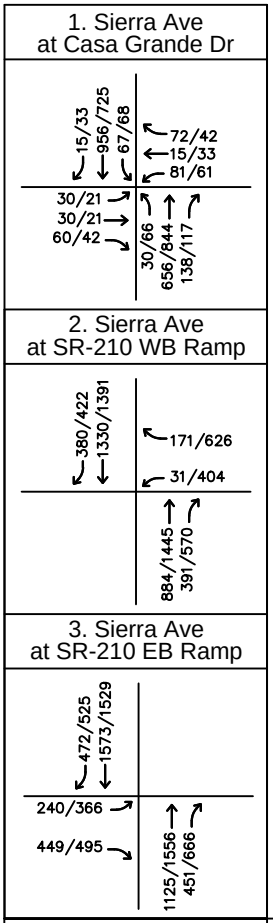
TABLE 6
SUMMARY OF INTERSECTION OPERATION
PROJECT OPENING YEAR 2021 PLUS PROJECT

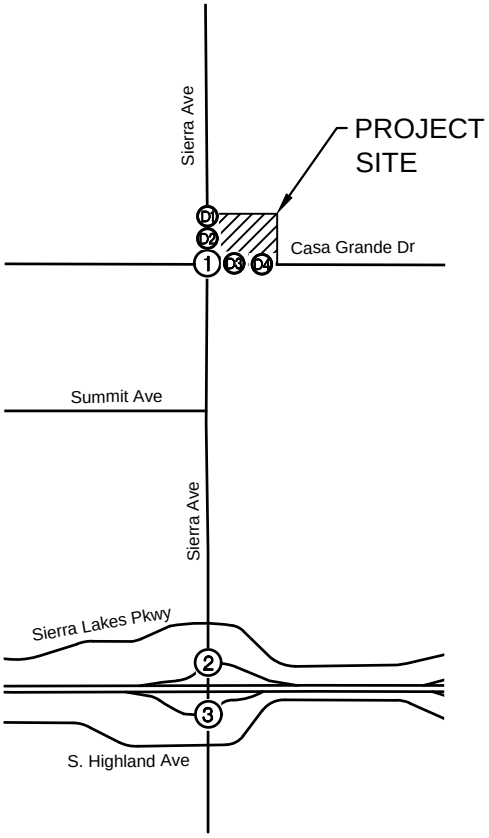
Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Project Impact	Impact Sig?	Without Project		With Project		Project Impact	Impact Sig?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Sierra Avenue at Casa Grande Drive	S	11.9	B	12.0	B	0.1	No	10.0	A	10.6	B	0.6	No
2	Sierra Avenue at SR-210 WB Ramp	S	8.4	A	8.5	A	0.1	No	17.5	B	17.6	B	0.1	No
3	Sierra Avenue at SR-210 EB Ramp	S	14.0	B	14.1	B	0.1	No	15.7	B	15.7	B	0.0	No
D1	Sierra Avenue at North Driveway	U			17.1	C	-	No			16.4	C	-	No
D2	Sierra Avenue at South Driveway	U			20.2	C	-	No			20.8	C	-	No
D3	Casa Grande Drive at West Driveway	U			9.1	A	-	No			9.0	A	-	No
D4	Casa Grande Drive at East Driveway	U			9.1	A	-	No			8.9	A	-	No

Notes:

- Bold and shaded values indicate intersections operating at an unacceptable Level of Service, or a significant impact to the intersection, per City standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At an unsignalized intersection, delay refers to the average delay per vehicle on the intersection approach with the highest delay.
- Delay values are based on the methodology outlined in the Highway Capacity Manual (6th Edition).
- S = Signalized; U = Unsignalized

NOT TO SCALE





D1. Sierra Ave at North Dwy	D2. Sierra Ave at South Dwy	D3. Casa Grande Dr at West Dwy	D4. Casa Grande Dr at East Dwy
FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 13
HORIZON YEAR 2040
TRAFFIC VOLUMES

TABLE 7
SUMMARY OF INTERSECTION OPERATION
HORIZON YEAR 2040

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Sierra Avenue at Casa Grande Drive	S	12.1	B	10.5	B
2	Sierra Avenue at SR-210 WB Ramp	S	9.0	A	17.6	B
3	Sierra Avenue at SR-210 EB Ramp	S	13.6	B	15.8	B

Notes:

- Bold and shaded values indicate intersections operating at an unacceptable Level of Service, or a significant impact to the intersection, per City standards.

- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.

- At an unsignalized intersection, delay refers to the average delay per vehicle on the intersection approach with the highest delay.

- Delay values are based on the methodology outlined in the Highway Capacity Manual (6th Edition).

- S = Signalized; U = Unsignalized

Horizon Year 2040 Plus Project Conditions

Project-related traffic was added to the Horizon Year 2040 traffic volumes. Horizon Year 2040 Plus Project peak hour turning movement volumes at study intersections are shown on Figure 14.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Horizon Year 2040 Plus Project condition. The results of the intersection analysis are shown on Table 8. Copies of intersection analysis worksheets for this scenario are provided in *Appendix C*.

Review of this table indicates that, with the addition of Project traffic, the study intersections would operate at an acceptable Level of Service.

MITIGATION MEASURES

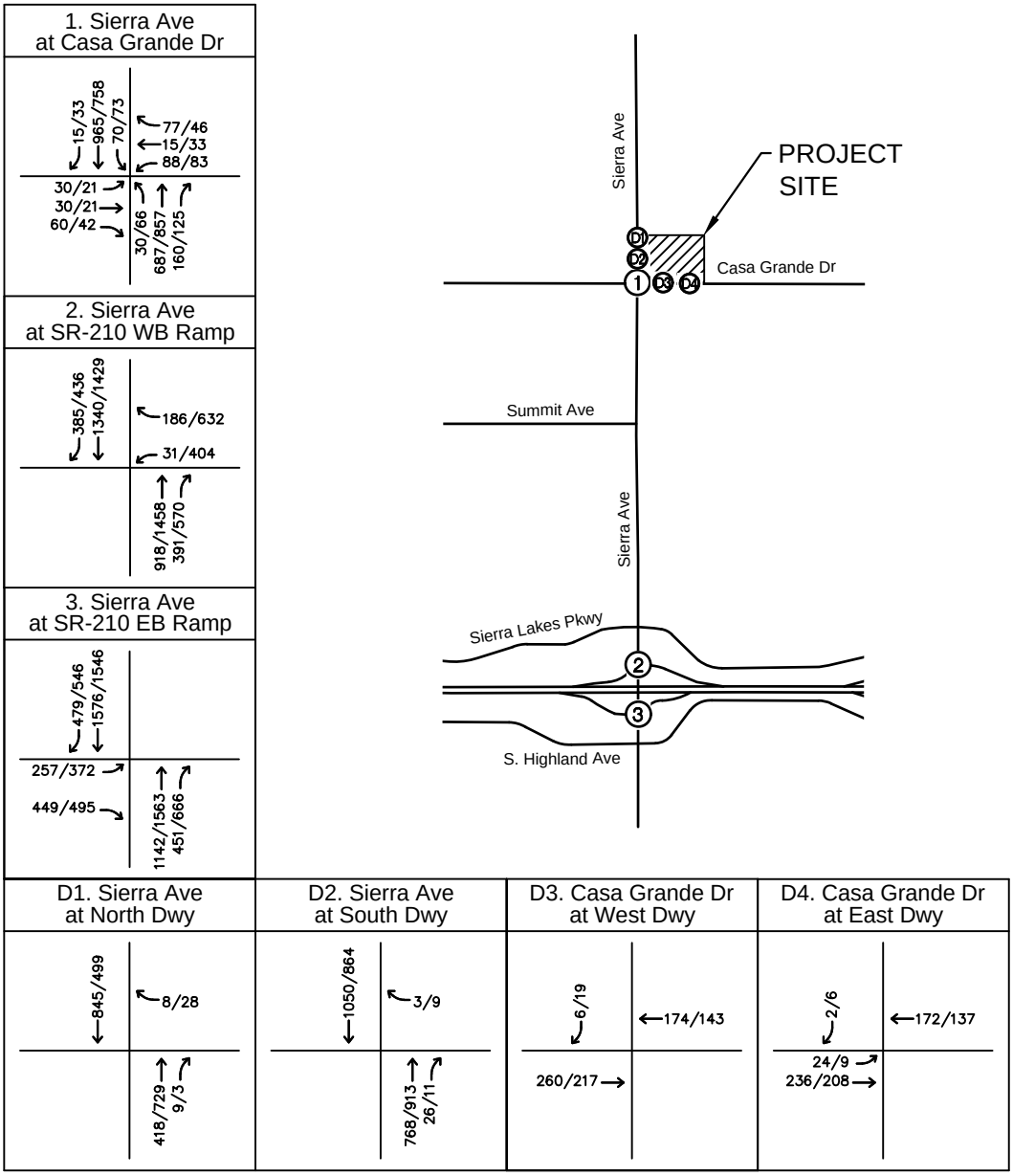
Based on the Level of Service standards and significant impact criteria discussed previously, the project-related impact would not be considered significant at any of the study intersections; therefore, no mitigation is required.

SITE CIRCULATION

Vehicular access for the project site would be via two full-movement driveways on Sierra Avenue, one western right-in/right-out driveway on Casa Grande Drive, and one full-movement driveway to the east. All project driveways would be unsignalized. In Horizon Year conditions, both driveways on Sierra Avenue are to only allow right-in/right-out movements due to the installation of a raised median.

The project site plan presented on Figure 2 (previously referenced) indicates that passenger vehicles would access the project site via the two driveways on the Sierra Avenue and trucks would access the project site via the two driveways on Casa Grande Drive. Because the west driveway on Casa Grande Drive only allows right-in/right-out movements, it is recommended that trucks enter the project site via the full-movement east driveway to reduce the potential for trucks spilling back into the intersection of Sierra Avenue at Casa Grande Drive.

NOT TO SCALE



LEGEND:

Ⓧ = Study Intersection

XX/YY = AM/PM Peak Hour Turning Movement Volumes

FIGURE 14
HORIZON YEAR 2040
PLUS PROJECT TRAFFIC VOLUMES

TABLE 8
SUMMARY OF INTERSECTION OPERATION
HORIZON YEAR 2040 PLUS PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Project Impact	Impact Sig?	Without Project		With Project		Project Impact	Impact Sig?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Sierra Avenue at Casa Grande Drive	S	12.1	B	12.7	B	0.6	No	10.5	B	11.4	B	0.9	No
2	Sierra Avenue at SR-210 WB Ramp	S	9.0	A	9.2	A	0.2	No	17.6	B	17.7	B	0.1	No
3	Sierra Avenue at SR-210 EB Ramp	S	13.6	B	13.8	B	0.2	No	15.8	B	15.9	B	0.1	No
D1[1]	Sierra Avenue at North Driveway	U			10.9	B	-	No			14.7	B	-	No
D2[1]	Sierra Avenue at South Driveway	U			14.7	B	-	No			17.0	C	-	No
D3	Casa Grande Drive at West Driveway	U			9.2	A	-	No			9.1	A	-	No
D4	Casa Grande Drive at East Driveway	U			9.2	A	-	No			9.0	A	-	No

Notes:

[1]Right-in/right-out operation at Sierra Ave Driveways under Horizon Year conditions

- Bold and shaded values indicate intersections operating at an unacceptable Level of Service, or a significant impact to the intersection, per City standards.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At an unsignalized intersection, delay refers to the average delay per vehicle on the intersection approach with the highest delay.
- Delay values are based on the methodology outlined in the Highway Capacity Manual (6th Edition).
- S = Signalized; U = Unsignalized

SUMMARY OF FINDINGS AND CONCLUSIONS

- The project is located on the northeast corner of the future intersection of Sierra Avenue and Casa Grande Drive, in the northern area of the City of Fontana.

- The project consists of the construction of a 332,996 square-foot warehouse with 134 parking stalls, including 67 trailer parking stalls as well as 35 loading docks.

- The project is estimated to generate 782 trips on a daily basis, with 77 trips in the morning peak hour, and 85 trips in the evening peak hour.

- Based on the City of Fontana's Level of Service standards and significant impact criteria, the project-related impact would not be considered significant at the study intersections; therefore, no mitigation is required.

- Vehicular access for the project site would be via two full-movement driveways on Sierra Avenue and two full-movement driveways on Casa Grande Drive. All project driveways would be unsignalized. Horizon Years allow only right-in/right-out driveways on Sierra Avenue.

- Passenger vehicles would access the project site via the two driveways on the Sierra Avenue. Trucks would access the project site via the two driveways on Casa Grande Drive.

- To improve the minor approach delay and access at the project driveways, it is recommended that the developer build half of the roadway width along the project frontage on Sierra Avenue which would include two northbound lanes and a two-way left-turn lane (TWLTL) .

- It is recommended that trucks enter the project site via the full-movement east driveway on Casa Grande Drive to reduce the potential for trucks spilling back into the intersection of Sierra Avenue at Casa Grande Drive. The west driveway on Casa Grande allows only right-in/right-out movements.

APPENDIX A

APPROVED SCOPING AGREEMENT

Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Fontana Engineering Department requirements for traffic impact analysis of the following project. The analysis must follow the SANBAG Traffic Study Guidelines Updated 2016.

Case No. (i.e. TR, PM, CUP, PP)
Related Cases -
SP No.
EIR No.
GPA No.
CZ No.
Project Name: Sierra and Casa Grande Warehouse
Project Address: Northeast corner of Sierra Avenue and Casa Grande Drive
Project Description: 317,820-square-foot Warehouse

	Consultant	Developer
Name:	Kimley-Horn and Associates, Inc.	RGA, Office of Architectural Design, Inc.
Address:	765 The City Drive, Suite 200	15231 Alton Parkway, Suite 100
	Orange, CA 92868	Irvine, CA 92618
Telephone:	714-939-1030	949-341-0920
Fax:		

A. Trip Generation Source: ITE Trip Generation Manual - 10th Edition - See attached Table

Current GP Land Use: Regional Mixed Use
Proposed Land Use: Industrial Warehouse
Current Zoning: Regional Mixed Use (R-MU)
Proposed Zoning: Regional Mixed Use with Overlay (R-MU Overlay

Current Trip Generation	In	Out	Total	Proposed Trip Generation	In	Out	Total
AM Trips	0	0	0		55	16	71
PM Trips	0	0	0		21	57	78

Internal Trip Allowance ☐ Yes ☒ No (0 % Trip Discount)
Pass-By Trip Allowance ☐ Yes ☒ No (0 % Trip Discount)

A passby trip discount of 25% is allowed for appropriate land uses. The passby trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: (attach exhibit for detailed assignment)
N Trucks - 10% / Cars - 0%
S Trucks - 90%* / Cars - 90%
E Trucks - 0% / Cars - 0%
W Trucks - 0% / Cars - 10%

* Trucks will travel south on Sierra Avenue to connect to the SR-210 freeway

C. Background Traffic

Project Build-out Year: 2021
Annual Ambient Growth Rate: 2.0 %
Phase Year(s) N/A
Other area projects to be analyzed: Information regarding Related Projects will be requested from the Planning Department

Model/Forecast methodology: Opening Year 2021: Existing + Growth + Cumulative Projects + Project / Forecast 2040: SBTAM Forecasts

D. Study intersections: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1. Sierra Avenue at Casa Grande Drive
2. Sierra Avenue at SR-210 Westbound Ramps
3. Sierra Avenue at SR-210 Eastbound Ramps
4.
5.
6.
7.
8.
9.
10.

E. Study Roadway Segments: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)*

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

E. Other Jurisdictional Impacts

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? ☑ Yes ☐ No

If so, name of City Jurisdiction: Rialto

F. Site Plan (please attach reduced copy)

G. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Engineering Department)
(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts_____

Recommended by:

Trevor Briggs — Consultant's Representative

587/2019 — Date

Approved Scoping Agreement:

_____ — City of Fontana Project Engineer

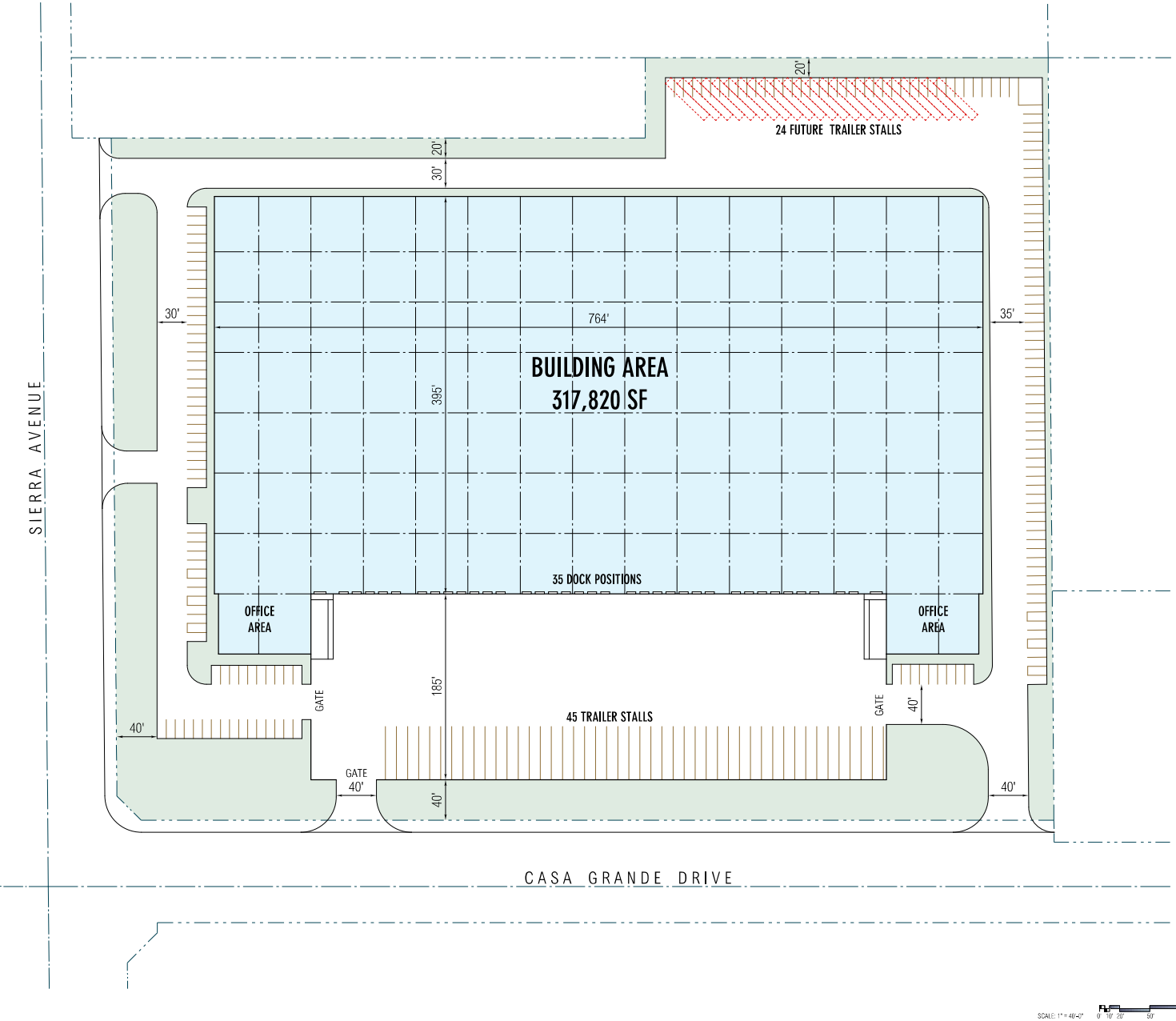
_____ — Date

Scoping Agreement Submitted on _____

Revised on _____

PROJECT DATA:

ZONE:	R-MU
NET SITE AREA:	663,561 SF / 15.23 AC
BUILDING AREA:	
FOOTPRINT AREA	312,820 SF
MEZZANINE	5,000 SF
TOTA	317,820 SF
LOT COVERAGE: (50% MAX)	47.14 %
FAR: (50% MAX)	47.89 %
PARKING REQUIRED:	
10,000 OFFICE 1/250 SF	40 STALLS
WHSE	
1/1,000 SF FIRST 40K	40 STALLS
1/4,000 SF ABV 40K	67 STALLS
TOTAL	147 STALLS
PARKING PROVIDED:	175 STALLS
LOADING DR: 1/30K	11 DOORS
TRAILER PARKING:	45 TRAILERS



RGA
Office of Architectural Design
15231 Alton Parkway, Suite 100
Irvine, CA 92618
T 949-341-0920
FX 949-341-0922

SIERRA AVE / CASA GRANDE DR

0000 SIERRA AVENUE, CITY OF FONTANA

PRELIMINARY SITE PLAN - SCHEME 02

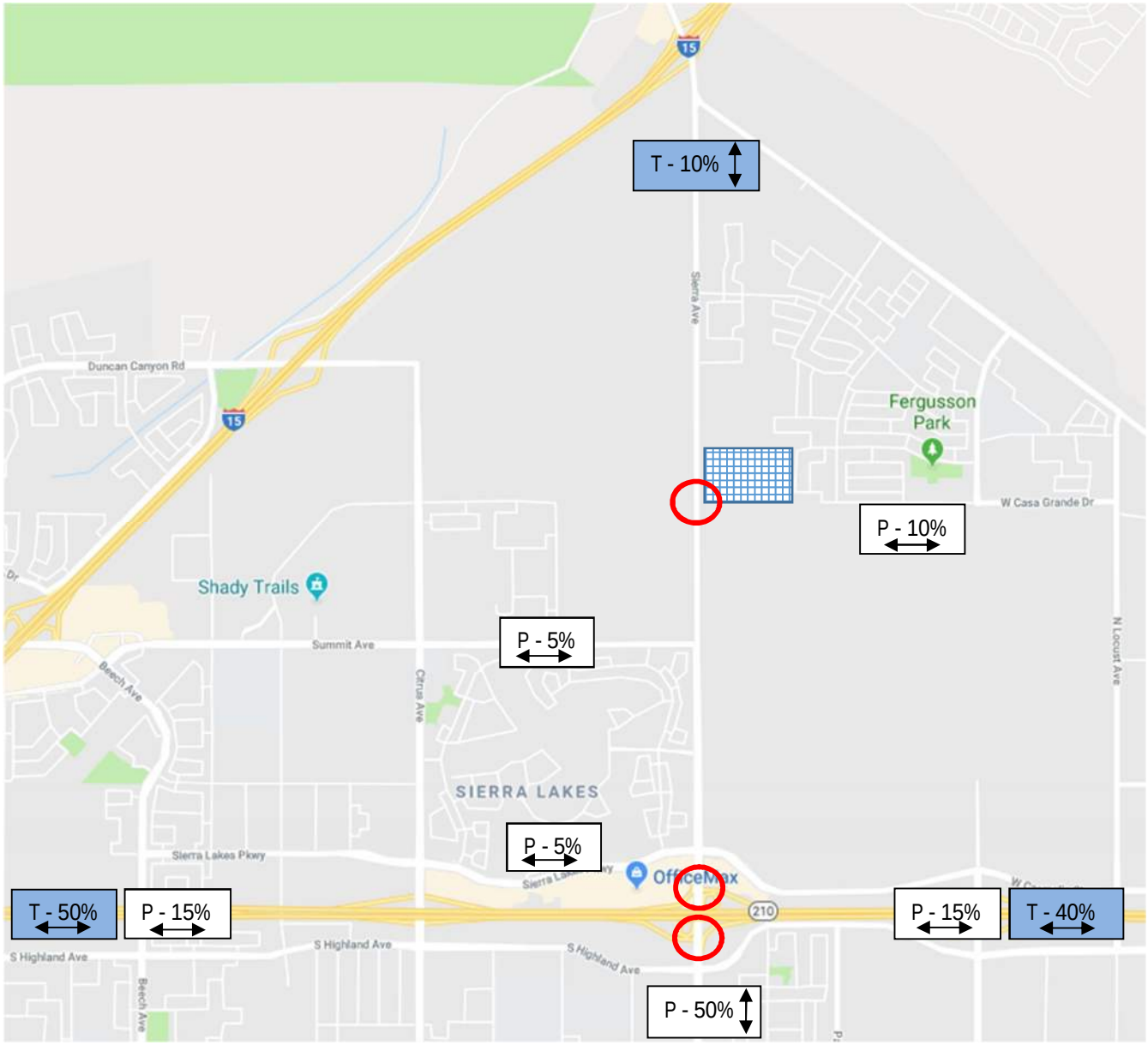
MARK	DATE	DESCRIPTION
	3/18/19	CONCEPTUAL SITE PLAN

RGA PROJECT NO:	1904.09
CAD FILE NAME:	1904-SK41-02
DRAWN BY:	MG
CHK'D BY:	CS
COPYRIGHT: RGA, OFFICE OF ARCHITECTURAL DESIGN, INC.	
SHEET TITLE	

A1-02

ATTACHMENT 1

ATTACHMENT 2
PROJECT STUDY AREA AND TRIP DISTRIBUTION



STUDY INTERSECTION

PROJECT SITE

T - XX% TRUCK TRIP DISTRIBUTION

P - YY% PASSENGER CAR TRIP DISTRIBUTION

ATTACHMENT 2
PROJECT STUDY AREA AND TRIP DISTRIBUTION

STUDY INTERSECTION

1. Sierra Avenue at Casa Grande Drive
2. Sierra Avenue at SR-210 Westbound Ramps
3. Sierra Avenue at SR-210 Eastbound Ramps

ATTACHMENT 3

SUMMARY OF PROJECT TRIP GENERATION

FONTANA - SIERRA AND CASA GRANDE WAREHOUSE

TRIP GENERATION RATES

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.740	0.131	0.039	0.170	0.051	0.139	0.190

PROJECT TRIP GENERATION

Project Land Use		Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		317.820	KSF	553	42	12	54	16	44	60
Passenger Vehicles	79.57%			440	33	10	43	13	35	48
Trucks	20.43%			113	9	2	11	3	9	12

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix [1]	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	79.57%	440	1.0	440	33	10	43	13	35	48
2-Axle Trucks	3.46%	19	1.5	29	2	1	3	1	2	3
3-Axle Trucks	4.64%	26	2.0	52	4	1	5	1	4	5
4+ Axle Trucks	12.33%	68	3.0	204	16	4	20	6	16	22
Total Truck PCE Trips				285	22	6	28	8	22	30
Total Project PCE Trips				725	55	16	71	21	57	78

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

[1] Source: Truck Trip Generation Study - City of Fontana, August 2003

APPENDIX **B**

TRAFFIC COUNT DATA SHEETS

Prepared by National Data & Surveying Services

CLASSIFICATION

Sierra Ave N/O The LGE Electronics Warehouse

Day: Tuesday
Date: 9/10/2019

City: Fontana
Project #: CA19_6114_001n

North Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	46	10	0	1	0	0	0	0	0	0	0	0	57
01:00	0	33	11	0	1	0	0	0	0	0	0	0	0	45
02:00	0	33	11	0	3	0	0	0	0	0	0	0	0	47
03:00	0	38	15	0	4	1	0	1	0	0	0	0	0	59
04:00	0	40	24	0	5	0	0	0	1	0	0	0	0	70
05:00	0	117	37	1	3	0	0	1	1	0	0	0	0	160
06:00	0	95	39	1	8	0	0	3	1	0	0	0	0	147
07:00	6	271	54	2	7	0	3	2	4	0	5	0	0	354
08:00	3	208	34	1	5	3	1	0	9	0	3	0	0	267
09:00	1	184	40	3	6	1	2	0	3	0	1	0	0	241
10:00	0	244	54	0	6	1	3	2	2	0	1	0	0	313
11:00	2	263	69	0	5	3	1	1	1	0	4	0	0	349
12:00 PM	1	307	83	0	9	2	1	2	1	0	2	0	0	408
13:00	1	390	64	2	13	2	1	1	2	0	2	0	0	478
14:00	1	413	73	1	9	0	0	1	1	0	2	0	0	501
15:00	0	475	107	3	9	1	1	2	4	0	1	0	0	603
16:00	1	498	125	1	12	1	0	1	1	0	0	0	0	640
17:00	2	539	107	1	5	0	0	0	2	0	0	0	0	656
18:00	1	389	82	0	12	0	0	4	0	0	0	0	0	488
19:00	1	384	53	2	4	0	0	1	0	0	0	0	0	445
20:00	1	313	62	0	3	0	0	0	0	0	0	0	0	379
21:00	0	243	29	0	5	0	0	0	0	0	0	0	0	277
22:00	0	135	22	0	2	1	0	1	0	0	0	0	0	161
23:00	0	79	15	0	1	0	0	1	0	0	0	0	0	96
Totals	21	5737	1220	18	138	16	13	24	33		21			7241
% of Totals	0%	79%	17%	0%	2%	0%	0%	0%	0%		0%			100%

AM Volumes	12	1572	398	8	54	9	10	10	22	0	14	0	0	2109
% AM	0%	22%	5%	0%	1%	0%	0%	0%	0%		0%			29%
AM Peak Hour	07:00	07:00	11:00	09:00	06:00	08:00	07:00	06:00	08:00		07:00			07:00
Volume	6	271	69	3	8	3	3	3	9		5			354
PM Volumes	9	4165	822	10	84	7	3	14	11	0	7	0	0	5132
% PM	0%	58%	11%	0%	1%	0%	0%	0%	0%		0%			71%
PM Peak Hour	17:00	17:00	16:00	15:00	13:00	12:00	12:00	18:00	15:00		12:00			17:00
Volume	2	539	125	3	13	2	1	4	4		2			656

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	621		9%	886		12%	1296		18%	4438		61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Sierra Ave N/O The LGE Electronics Warehouse

Day: Tuesday
Date: 9/10/2019

City: Fontana
Project #: CA19_6114_001s

South Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	34	5	0	1	0	0	1	0	0	0	0	0	41
01:00	0	21	1	0	1	0	0	0	0	0	0	0	0	23
02:00	0	16	8	0	3	0	0	1	0	0	0	0	0	28
03:00	0	47	8	0	1	0	0	0	0	0	0	0	0	56
04:00	0	95	25	0	0	0	0	1	0	0	0	0	0	121
05:00	0	158	58	0	6	0	0	1	0	0	0	0	0	223
06:00	0	388	74	0	13	0	0	6	0	0	0	0	0	481
07:00	0	666	93	0	10	3	0	1	1	0	0	0	0	774
08:00	0	509	91	2	13	5	0	1	5	0	1	0	0	627
09:00	2	344	78	1	8	0	2	1	1	0	1	0	0	438
10:00	1	351	66	4	12	4	1	1	1	0	1	0	0	442
11:00	2	308	68	0	10	3	0	1	4	0	3	0	0	399
12:00 PM	0	307	66	0	8	0	0	1	3	0	2	0	0	387
13:00	4	326	64	2	8	2	0	0	6	0	2	0	0	414
14:00	1	397	93	1	8	2	0	3	2	0	0	0	0	507
15:00	0	395	67	3	9	0	0	2	3	0	0	0	0	479
16:00	2	335	69	2	9	0	0	3	0	0	0	0	0	420
17:00	1	325	76	1	11	0	0	1	0	0	0	0	0	415
18:00	1	309	50	0	4	0	0	2	0	0	0	0	0	366
19:00	0	191	35	1	3	0	0	3	1	0	0	0	0	234
20:00	0	168	22	0	4	1	0	1	0	0	0	0	0	196
21:00	0	108	10	0	3	0	0	0	0	0	0	0	0	121
22:00	0	88	12	0	1	0	0	2	0	0	0	0	0	103
23:00	0	63	8	0	1	0	0	0	0	0	0	0	0	72
Totals	14	5949	1147	17	147	20	3	33	27		10			7367
% of Totals	0%	81%	16%	0%	2%	0%	0%	0%	0%		0%			100%

AM Volumes	5	2937	575	7	78	15	3	15	12	0	6	0	0	3653
% AM	0%	40%	8%	0%	1%	0%	0%	0%	0%		0%			50%
AM Peak Hour	09:00	07:00	07:00	10:00	06:00	08:00	09:00	06:00	08:00		11:00			07:00
Volume	2	666	93	4	13	5	2	6	5		3			774
PM Volumes	9	3012	572	10	69	5	0	18	15	0	4	0	0	3714
% PM	0%	41%	8%	0%	1%	0%		0%	0%		0%			50%
PM Peak Hour	13:00	14:00	14:00	15:00	17:00	13:00		14:00	13:00		12:00			14:00
Volume	4	397	93	3	11	2		3	6		2			507

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	↔	%	Volume	↔	%	Volume	↔	%	Volume	↔	%
	1401		19%	801		11%	835		11%	4330		59%

Classification Definitions

1 Motorcycles	**4** Buses	**7** > =4-Axle Single Units	**10** >=6-Axle Single Trailers	**13** >=7-Axle Multi-Trailers
2 Passenger Cars	**5** 2-Axle, 6-Tire Single Units	**8** <=4-Axle Single Trailers	**11** <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	**6** 3-Axle Single Units	**9** 5-Axle Single Trailers	**12** 6-Axle Multi-Trailers	

Prepared by National Data & Surveying Services

CLASSIFICATION

Casa Grande Dr Bet. Palmetto Ave & Tamarind Ave

Day: Tuesday
Date: 9/10/2019

City: Fontana
Project #: CA19_6114_002e

East Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
01:00	0	16	1	0	0	0	0	0	0	0	0	0	0	17
02:00	0	22	2	0	0	0	0	0	0	0	0	0	0	24
03:00	0	78	12	0	0	0	0	0	0	0	0	0	0	90
04:00	0	18	3	0	0	0	0	0	0	0	0	0	0	21
05:00	0	34	2	0	0	0	0	0	0	0	0	0	0	36
06:00	0	27	6	0	0	1	0	0	1	0	0	0	0	35
07:00	0	65	8	1	2	0	0	0	0	0	0	0	0	76
08:00	0	35	9	0	0	1	0	0	0	0	0	0	0	45
09:00	0	21	3	0	1	1	0	0	1	0	0	0	0	27
10:00	0	41	5	1	0	2	0	0	2	0	0	0	0	51
11:00	0	35	5	0	1	1	0	0	0	0	0	0	0	42
12:00 PM	0	49	5	0	1	0	0	0	0	0	0	0	0	55
13:00	0	40	4	0	1	0	0	0	0	0	0	0	0	45
14:00	0	65	10	0	0	0	0	0	0	0	0	0	0	75
15:00	0	55	10	0	0	0	0	0	0	0	0	0	0	65
16:00	0	153	29	0	1	0	0	0	0	0	0	0	0	183
17:00	0	49	11	0	0	0	0	0	0	0	0	0	0	60
18:00	0	50	7	0	1	0	0	0	0	0	0	0	0	58
19:00	0	55	6	0	0	0	0	0	0	0	0	0	0	61
20:00	0	24	2	0	0	0	0	0	0	0	0	0	0	26
21:00	0	45	9	0	0	0	0	0	1	0	0	0	0	55
22:00	0	20	6	0	0	0	0	0	0	0	0	0	0	26
23:00	0	11	2	0	1	0	0	0	0	0	0	0	0	14
Totals		1015	158	2	9	6			5					1195
% of Totals		85%	13%	0%	1%	1%			0%					100%

AM Volumes	0	399	57	2	4	6	0	0	4	0	0	0	0	472
% AM		33%	5%	0%	0%	1%			0%					39%
AM Peak Hour		03:00	03:00	07:00	07:00	10:00			10:00					03:00
Volume		78	12	1	2	2			2					90
PM Volumes	0	616	101	0	5	0	0	0	1	0	0	0	0	723
% PM		52%	8%		0%				0%					61%
PM Peak Hour		16:00	16:00		12:00				21:00					16:00
Volume		153	29		1				1					183

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	121		10%	100		8%	243		20%	731		61%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services

CLASSIFICATION

Casa Grande Dr Bet. Palmetto Ave & Tamarind Ave

Day: Tuesday
Date: 9/10/2019

City: Fontana
Project #: CA19_6114_002w

West Bound

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
01:00	0	10	0	0	0	0	0	0	0	0	0	0	0	10
02:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
03:00	0	14	1	0	0	0	0	0	0	0	0	0	0	15
04:00	0	19	3	0	0	0	0	0	0	0	0	0	0	22
05:00	0	130	20	0	5	0	0	0	0	0	0	0	0	155
06:00	0	25	4	0	0	0	0	0	0	0	0	0	0	29
07:00	0	58	6	0	2	0	0	0	0	0	0	0	0	66
08:00	0	29	6	0	0	0	0	0	0	0	0	0	0	35
09:00	0	30	6	0	0	0	0	0	0	0	0	0	0	36
10:00	0	26	6	0	0	0	0	0	0	0	0	0	0	32
11:00	0	40	10	0	2	0	0	0	0	0	0	0	0	52
12:00 PM	0	39	6	0	3	0	0	0	0	0	0	0	0	48
13:00	0	28	6	0	0	0	0	0	0	0	0	0	0	34
14:00	0	59	7	0	0	0	0	0	0	0	0	0	0	66
15:00	0	78	10	0	2	0	0	0	0	0	0	0	0	90
16:00	1	139	23	0	3	0	0	0	0	0	0	0	0	166
17:00	0	37	9	0	0	0	0	0	0	0	0	0	0	46
18:00	0	45	8	0	2	0	0	0	0	0	0	0	0	55
19:00	0	42	5	0	0	0	0	0	0	0	0	0	0	47
20:00	0	35	9	0	0	0	0	0	0	0	0	0	0	44
21:00	0	31	3	0	0	0	0	0	0	0	0	0	0	34
22:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
23:00	0	6	1	0	1	0	0	0	0	0	0	0	0	8
Totals	1	941	150		20									1112
% of Totals	0%	85%	13%		2%									100%

AM Volumes	0	391	63	0	9	0	0	0	0	0	0	0	0	463
% AM		35%	6%		1%									42%
AM Peak Hour		05:00	05:00		05:00									05:00
Volume		130	20		5									155
PM Volumes	1	550	87	0	11	0	0	0	0	0	0	0	0	649
% PM	0%	49%	8%		1%									58%
PM Peak Hour	16:00	16:00	16:00		12:00									16:00
Volume	1	139	23		3									166

Directional Peak Periods	AM 7-9			NOON 12-2			PM 4-6			Off Peak Volumes		
All Classes	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%	Volume	⟷	%
	101		9%	82		7%	212		19%	717		64%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 WB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-001
Date: 9/10/2019

Cars

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	161	108	0	0	262	70	0	0	0	0	0	164	0	65	0	830
7:15 AM	0	203	111	0	0	264	61	0	0	0	0	0	144	0	45	0	828
7:30 AM	0	138	80	0	0	285	49	0	0	0	0	0	95	0	66	0	713
7:45 AM	0	144	61	0	0	250	51	0	0	0	0	0	148	0	82	0	736
8:00 AM	0	135	59	0	0	242	60	0	0	0	0	0	91	0	79	0	666
8:15 AM	0	151	71	0	0	221	54	0	0	0	0	0	79	0	68	0	644
8:30 AM	0	128	71	0	0	191	49	0	0	0	0	0	87	0	43	0	569
8:45 AM	0	145	74	0	0	204	37	0	0	0	0	0	96	0	57	0	613
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1205	635	0	0	1919	431	0	0	0	0	0	904	0	505	0	5599
APPROACH %'s :	0.00%	65.49%	34.51%	0.00%	0.00%	81.66%	18.34%	0.00%					64.16%	0.00%	35.84%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	646	360	0	0	1061	231	0	0	0	0	0	551	0	258	0	3107
PEAK HR FACTOR :	0.00	0.796	0.811	0.000	0.000	0.931	0.825	0.000	0.000	0.000	0.000	0.000	0.840	0.000	0.787	0.000	0.936
		0.801				0.967								0.879			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	246	113	0	0	266	58	0	0	0	0	0	86	0	92	0	861
4:15 PM	0	288	99	0	0	269	55	0	0	0	0	0	98	0	94	0	903
4:30 PM	0	269	120	0	0	300	69	0	0	0	0	0	99	0	104	0	961
4:45 PM	0	269	114	0	0	251	55	0	0	0	0	0	95	0	108	0	892
5:00 PM	0	290	135	0	0	293	75	0	0	0	0	0	94	0	105	0	992
5:15 PM	0	273	124	0	0	254	66	0	0	0	0	0	87	0	123	0	927
5:30 PM	0	304	146	0	0	281	89	0	0	0	0	0	94	0	99	0	1013
5:45 PM	0	289	129	0	0	279	58	0	0	0	0	0	100	0	125	0	980
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2228	980	0	0	2193	525	0	0	0	0	0	753	0	850	0	7529
APPROACH %'s :	0.00%	69.45%	30.55%	0.00%	0.00%	80.68%	19.32%	0.00%					46.97%	0.00%	53.03%	0.00%	
PEAK HR :	**05:00 PM - 06:00 PM**																TOTAL
PEAK HR VOL :	0	1156	534	0	0	1107	288	0	0	0	0	0	375	0	452	0	3912
PEAK HR FACTOR :	0.00	0.951	0.914	0.000	0.000	0.945	0.809	0.000	0.000	0.000	0.000	0.000	0.938	0.000	0.904	0.000	0.965
		0.939				0.943								0.919			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 WB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-001
Date: 9/10/2019

2axle

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 WB Ramps				SR-210 Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	1	0	4
7:15 AM	0	2	1	0	0	2	0	0	0	0	0	0	0	0	1	0	6
7:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	3
7:45 AM	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	0	8
8:00 AM	0	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	4	0	0	0	4	1	0	0	0	0	0	0	0	2	0	11
8:30 AM	0	2	0	0	0	4	1	0	0	0	0	0	0	0	1	0	8
8:45 AM	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	18	3	0	0	22	3	0	0	0	0	0	1	0	5	0	52
APPROACH %'s :	0.00%	85.71%	14.29%	0.00%	0.00%	88.00%	12.00%	0.00%					16.67%	0.00%	83.33%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	7	2	0	0	8	1	0	0	0	0	0	1	0	2	0	21
PEAK HR FACTOR :	0.000	0.583	0.500	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.656
		0.563				0.563								0.750			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	3	0	0	0	1	1	0	0	0	0	0	2	0	1	0	8
4:15 PM	0	3	0	0	0	2	3	0	0	0	0	0	1	0	1	0	10
4:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	4
5:00 PM	0	0	1	0	0	4	2	0	0	0	0	0	0	0	0	0	7
5:15 PM	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4
5:30 PM	0	1	1	0	0	2	1	0	0	0	0	0	0	0	1	0	6
5:45 PM	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	13	3	0	0	16	7	0	0	0	0	0	5	0	5	0	49
APPROACH %'s :	0.00%	81.25%	18.75%	0.00%	0.00%	69.57%	30.43%	0.00%					50.00%	0.00%	50.00%	0.00%	
PEAK HR :	**05:00 PM - 06:00 PM**																TOTAL
PEAK HR VOL :	0	4	3	0	0	8	3	0	0	0	0	0	2	0	1	0	21
PEAK HR FACTOR :	0.00	0.500	0.750	0.000	0.000	0.500	0.375	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.250	0.000	0.750
		0.875				0.458								0.750			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 WB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-001
Date: 9/10/2019

3axle

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
7:30 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2
8:00 AM	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	6
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	3
8:30 AM	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3
8:45 AM	0	1	0	0	0	2	1	0	0	0	0	0	0	0	1	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	5	1	0	0	12	4	0	0	0	0	0	1	0	4	0	27
APPROACH %'s :	0.00%	83.33%	16.67%	0.00%	0.00%	75.00%	25.00%	0.00%					20.00%	0.00%	80.00%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	3	1	0	0	4	0	0	0	0	0	0	1	0	1	0	10
PEAK HR FACTOR :	0.000	0.375	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.625
		0.333				0.500								0.500			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	4	0	0	0	2	1	0	0	0	0	0	0	0	0	0	7
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2
5:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	4
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	4	2	0	0	4	5	0	0	0	0	0	1	0	3	0	19
APPROACH %'s :	0.00%	66.67%	33.33%	0.00%	0.00%	44.44%	55.56%	0.00%					25.00%	0.00%	75.00%	0.00%	
PEAK HR :	**05:00 PM - 06:00 PM**																TOTAL
PEAK HR VOL :	0	0	2	0	0	1	2	0	0	0	0	0	1	0	2	0	8
PEAK HR FACTOR :	0.00	0.000	0.250	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.500
		0.250				0.750								0.375			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 WB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-001
Date: 9/10/2019

4axle

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	1	0	0	1	1	0	0	0	0	0	0	0	2	0	6
7:15 AM	0	6	0	0	0	1	2	0	0	0	0	0	0	0	3	0	12
7:30 AM	0	2	0	0	0	0	1	0	0	0	0	0	0	0	2	0	5
7:45 AM	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3	0	8
8:00 AM	0	1	0	0	0	1	3	0	0	0	0	0	0	0	5	0	10
8:15 AM	0	5	1	0	0	1	2	0	0	0	0	0	0	0	2	0	11
8:30 AM	0	6	0	0	0	3	5	0	0	0	0	0	1	0	0	0	15
8:45 AM	0	1	0	0	0	0	1	0	0	0	0	0	2	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	23	4	0	0	9	15	0	0	0	0	0	3	0	17	0	71
APPROACH %'s :	0.00%	85.19%	14.81%	0.00%	0.00%	37.50%	62.50%	0.00%					15.00%	0.00%	85.00%	0.00%	
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	10	3	0	0	4	4	0	0	0	0	0	0	0	10	0	31
PEAK HR FACTOR :	0.000	0.417	0.375	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.646
		0.542				0.667								0.833			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	0	0	0	0	1.5	0	1.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	5	1	0	0	0	2	0	0	0	0	0	0	0	0	0	8
4:15 PM	0	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5
4:45 PM	0	2	1	0	0	1	2	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7
5:15 PM	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	3
5:45 PM	0	2	1	0	0	2	1	0	0	0	0	0	0	0	2	0	8
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	20	5	0	0	7	9	0	0	0	0	0	2	0	3	0	46
APPROACH %'s :	0.00%	80.00%	20.00%	0.00%	0.00%	43.75%	56.25%	0.00%					40.00%	0.00%	60.00%	0.00%	
PEAK HR :	**05:00 PM - 06:00 PM**																TOTAL
PEAK HR VOL :	0	8	1	0	0	5	3	0	0	0	0	0	2	0	3	0	22
PEAK HR FACTOR :	0.00	0.400	0.250	0.000	0.000	0.625	0.375	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.688
		0.450				0.667								0.625			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 EB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-002
Date: 9/10/2019

Cars

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	258	107	0	0	343	76	0	29	0	92	0	0	0	0	0	905
7:15 AM	0	258	106	0	0	330	81	0	30	0	79	0	0	0	0	0	884
7:30 AM	0	191	137	0	0	289	88	0	18	0	118	0	0	0	0	0	841
7:45 AM	0	169	82	0	0	318	76	0	39	0	129	0	0	0	0	0	813
8:00 AM	0	157	57	0	0	276	59	0	34	0	127	0	0	0	0	0	710
8:15 AM	0	187	83	0	0	238	54	0	41	0	118	0	0	0	0	0	721
8:30 AM	0	162	65	0	0	216	66	0	36	0	87	0	0	0	0	0	632
8:45 AM	0	185	61	0	0	250	42	0	39	0	81	0	0	0	0	0	658
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1567	698	0	0	2260	542	0	266	0	831	0	0	0	0	0	6164
APPROACH %'s :	0.00%	69.18%	30.82%	0.00%	0.00%	80.66%	19.34%	0.00%	24.25%	0.00%	75.75%	0.00%					
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	876	432	0	0	1280	321	0	116	0	418	0	0	0	0	0	3443
PEAK HR FACTOR :	0.00	0.849	0.788	0.000	0.000	0.933	0.912	0.000	0.744	0.000	0.810	0.000	0.000	0.000	0.000	0.000	0.951
		0.896				0.955				0.795							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	329	114	0	0	269	75	0	41	0	101	0	0	0	0	0	929
4:15 PM	0	322	148	0	0	284	90	0	60	0	112	0	0	0	0	0	1016
4:30 PM	0	340	153	0	0	286	95	0	33	0	125	0	0	0	0	0	1032
4:45 PM	0	351	149	0	0	275	83	0	42	0	122	0	0	0	0	0	1022
5:00 PM	0	377	171	0	0	276	113	0	47	0	108	0	0	0	0	0	1092
5:15 PM	0	361	146	0	0	246	86	0	45	0	91	0	0	0	0	0	975
5:30 PM	0	400	149	0	0	266	104	0	47	0	114	0	0	0	0	0	1080
5:45 PM	0	364	124	0	0	280	98	0	42	0	112	0	0	0	0	0	1020
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2844	1154	0	0	2182	744	0	357	0	885	0	0	0	0	0	8166
APPROACH %'s :	0.00%	71.14%	28.86%	0.00%	0.00%	74.57%	25.43%	0.00%	28.74%	0.00%	71.26%	0.00%					
PEAK HR :	**04:15 PM - 05:15 PM**																TOTAL
PEAK HR VOL :	0	1390	621	0	0	1121	381	0	182	0	467	0	0	0	0	0	4162
PEAK HR FACTOR :	0.00	0.922	0.908	0.000	0.000	0.980	0.843	0.000	0.758	0.000	0.934	0.000	0.000	0.000	0.000	0.000	0.953
		0.917				0.965				0.943							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 EB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-002
Date: 9/10/2019

2axle

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
7:15 AM	0	1	0	0	0	1	1	0	0	0	3	0	0	0	0	0	6
7:30 AM	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	2	0	0	0	3	0	0	1	0	0	0	0	0	0	0	6
8:00 AM	0	2	0	0	0	1	0	0	2	0	1	0	0	0	0	0	6
8:15 AM	0	2	0	0	0	3	2	0	2	0	0	0	0	0	0	0	9
8:30 AM	0	1	1	0	0	2	1	0	0	0	2	0	0	0	0	0	7
8:45 AM	0	3	0	0	0	3	3	0	0	0	1	0	0	0	0	0	10
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	2	0	0	16	7	0	6	0	7	0	0	0	0	0	49
APPROACH %'s :	0.00%	84.62%	15.38%	0.00%	0.00%	69.57%	30.43%	0.00%	46.15%	0.00%	53.85%	0.00%					
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	3	1	0	0	7	1	0	2	0	3	0	0	0	0	0	17
PEAK HR FACTOR :	0.000	0.375	0.250	0.000	0.000	0.583	0.250	0.000	0.500	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.708
		0.500				0.667				0.417							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	7
4:15 PM	0	2	2	0	0	2	2	0	2	0	1	0	0	0	0	0	11
4:30 PM	0	3	0	0	0	3	1	0	0	0	0	0	0	0	0	0	7
4:45 PM	0	0	2	0	0	1	2	0	0	0	2	0	0	0	0	0	7
5:00 PM	0	2	1	0	0	2	1	0	1	0	0	0	0	0	0	0	7
5:15 PM	0	1	1	0	0	2	1	0	0	0	0	0	0	0	0	0	5
5:30 PM	0	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	5
5:45 PM	0	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	13	11	0	0	16	8	0	3	0	3	0	0	0	0	0	54
APPROACH %'s :	0.00%	54.17%	45.83%	0.00%	0.00%	66.67%	33.33%	0.00%	50.00%	0.00%	50.00%	0.00%					
PEAK HR :	**04:15 PM - 05:15 PM**																TOTAL
PEAK HR VOL :	0	7	5	0	0	8	6	0	3	0	3	0	0	0	0	0	32
PEAK HR FACTOR :	0.00	0.583	0.625	0.000	0.000	0.667	0.750	0.000	0.375	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.727
		0.750				0.875				0.500							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 EB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-002
Date: 9/10/2019

3axle

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	0	1	0	0	2	0	1	0	0	0	0	0	5
7:30 AM	0	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	1	0	0	4	1	0	0	0	0	0	0	0	0	0	6
8:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	2	0	0	6	8	0	3	0	2	0	0	0	0	0	24
APPROACH %'s :	0.00%	60.00%	40.00%	0.00%	0.00%	42.86%	57.14%	0.00%	60.00%	0.00%	40.00%	0.00%					
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	3	0	0	0	2	3	0	2	0	2	0	0	0	0	0	12
PEAK HR FACTOR :	0.000	0.750	0.000	0.000	0.000	0.500	0.375	0.000	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.600
		0.750				0.625				0.333							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	1	0	0	2	0	0	0	0	0	0	0	4
4:30 PM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3	2	0	0	3	2	0	2	0	0	0	0	0	0	0	12
APPROACH %'s :	0.00%	60.00%	40.00%	0.00%	0.00%	60.00%	40.00%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	**04:15 PM - 05:15 PM**																TOTAL
PEAK HR VOL :	0	2	1	0	0	2	1	0	2	0	0	0	0	0	0	0	8
PEAK HR FACTOR :	0.00	0.500	0.250	0.000	0.000	0.500	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
		0.750				0.375				0.250							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sierra Ave & SR-210 EB Ramps
City: Fontana
Control: Signalized

Project ID: 19-06113-002
Date: 9/10/2019

4axle

NS/EW Streets:	Sierra Ave				Sierra Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
7:15 AM	0	3	0	0	0	1	0	0	3	0	1	0	0	0	0	0	8
7:30 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	2	0	0	0	2	0	0	1	0	0	0	0	0	0	0	5
8:00 AM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
8:15 AM	0	1	0	0	0	1	0	0	4	0	1	0	0	0	0	0	7
8:30 AM	0	3	0	0	0	2	2	0	3	0	0	0	0	0	0	0	10
8:45 AM	0	1	1	0	0	2	0	0	1	0	1	0	0	0	0	0	6
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	1	0	0	10	2	0	16	0	3	0	0	0	0	0	43
APPROACH %'s :	0.00%	91.67%	8.33%	0.00%	0.00%	83.33%	16.67%	0.00%	84.21%	0.00%	15.79%	0.00%					
PEAK HR :	**07:00 AM - 08:00 AM**																TOTAL
PEAK HR VOL :	0	5	0	0	0	4	0	0	7	0	1	0	0	0	0	0	17
PEAK HR FACTOR :	0.000	0.417	0.000	0.000	0.000	0.500	0.000	0.000	0.583	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.531
		0.417				0.500				0.500							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	3	2	0	0	3	2	0	1.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	1	1	0	0	0	0	0	3	0	1	0	0	0	0	0	6
4:15 PM	0	3	1	0	0	0	1	0	1	0	0	0	0	0	0	0	6
4:30 PM	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3
4:45 PM	0	1	1	0	0	1	0	0	2	0	1	0	0	0	0	0	6
5:00 PM	0	3	0	0	0	2	0	0	2	0	0	0	0	0	0	0	7
5:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	0	0	2	0	1	0	0	0	0	0	0	0	4
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	11	3	0	0	4	5	0	12	0	2	0	0	0	0	0	37
APPROACH %'s :	0.00%	78.57%	21.43%	0.00%	0.00%	44.44%	55.56%	0.00%	85.71%	0.00%	14.29%	0.00%					
PEAK HR :	**04:15 PM - 05:15 PM**																TOTAL
PEAK HR VOL :	0	8	2	0	0	3	1	0	7	0	1	0	0	0	0	0	22
PEAK HR FACTOR :	0.00	0.667	0.500	0.000	0.000	0.375	0.250	0.000	0.875	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.786
		0.625				0.500				0.667							

Existing Peak Hour Volumes - Classification Counts

2 Sierra Avenue at SR-210 WB Ramp

	AM Peak Hour Volumes									PM Peak Hour Volumes								
		Truck Volumes							Total		Truck Volumes							Total
	Passenger Vehicles	2-Axle 2	3-Axle 2.5	4-Axle 3.0	Total Trucks	Truck %-age	PCE	Average PCE	PCE Volume	Passenger Vehicles	2-Axle 2	3-Axle 2.5	4-Axle 3.0	Total Trucks	Truck %-age	PCE	Average PCE	PCE Volume
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
NT	646	7	3	10	20	3.0%	52	2.6	698	1,156	4	0	8	12	1.0%	32	2.7	1,188
NR	360	2	1	3	6	1.6%	16	2.7	376	534	3	2	1	6	1.1%	14	2.3	548
SL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ST	1,061	8	4	4	16	1.5%	38	2.4	1,099	1,107	8	1	5	14	1.2%	34	2.4	1,141
SR	231	1	0	4	5	2.1%	14	2.8	245	288	3	2	3	8	2.7%	20	2.5	308
EL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ER	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WL	0	1	1	0	2	100.0%	5	2.5	5	375	2	1	2	5	1.3%	13	2.6	388
WT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WR	0	2	1	10	13	100.0%	37	2.8	37	452	1	2	3	6	1.3%	16	2.7	468
									2,460									4,041
North Leg Volumes																		
Approach	1,292	9	4	8	21		52		1,344	1,395	11	3	8	22		54		1,449
Depart	646	9	4	20	33		89		735	1,608	5	2	11	18		48		1,656
Total	1,938	18	8	28	54	2.7%	141	2.6	2,079	3,003	16	5	19	40	1.3%	102	2.6	3,105
South Leg Volumes																		
Approach	1,006	9	4	13	26		68		1,074	1,690	7	2	9	18		46		1,736
Depart	1,061	9	5	4	18		43		1,104	1,482	10	2	7	19		47		1,529
Total	2,067	18	9	17	44	2.1%	111	2.5	2,178	3,172	17	4	16	37	1.2%	93	2.5	3,265
East Leg Volumes																		
Approach	0	3	2	10	15		42		42	827	3	3	5	11		29		856
Depart	360	2	1	3	6		16		376	534	3	2	1	6		14		548
Total	360	5	3	13	21	5.5%	58	2.8	418	1,361	6	5	6	17	1.2%	43	2.5	1,404
West Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	231	1	0	4	5		14		245	288	3	2	3	8		20		308
Total	231	1	0	4	5	2.1%	14	2.8	245	288	3	2	3	8	2.7%	20	2.5	308
All Legs																		
Approach	2,298	21	10	31	62		162		2,460	3,912	21	8	22	51		129		4,041
Depart	2,298	21	10	31	62		162		2,460	3,912	21	8	22	51		129		4,041
Total	4,596	42	20	62	124	2.6%	324	2.6	4,920	7,824	42	16	44	102	1.3%	258	2.5	8,082

Existing Peak Hour Volumes - Classification Counts

3 Sierra Avenue at SR-210 EB Ramp

	AM Peak Hour Volumes									PM Peak Hour Volumes								
		Truck Volumes							Total		Truck Volumes							Total
	Passenger Vehicles	2-Axle 2	3-Axle 2.5	4-Axle 3.0	Total Trucks	Truck %-age	PCE	Average PCE	PCE Volume	Passenger Vehicles	2-Axle 2	3-Axle 2.5	4-Axle 3.0	Total Trucks	Truck %-age	PCE	Average PCE	PCE Volume
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
NT	876	3	3	5	11	1.2%	29	2.6	905	1,390	7	2	8	17	1.2%	43	2.5	1,433
NR	432	1	0	0	1	0.2%	2	2.0	434	621	5	1	2	8	1.3%	19	2.4	640
SL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ST	1,280	7	2	4	13	1.0%	31	2.4	1,311	1,121	8	2	3	13	1.1%	30	2.3	1,151
SR	321	1	3	0	4	1.2%	10	2.5	331	381	6	1	1	8	2.1%	18	2.3	399
EL	116	2	2	7	11	8.7%	30	2.7	146	182	3	2	7	12	6.2%	32	2.7	214
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ER	418	3	2	1	6	1.4%	14	2.3	432	467	3	0	1	4	0.8%	9	2.3	476
WL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
									3,559									4,313
North Leg Volumes																		
Approach	1,601	8	5	4	17		41		1,642	1,502	14	3	4	21		48		1,550
Depart	992	5	5	12	22		59		1,051	1,572	10	4	15	29		75		1,647
Total	2,593	13	10	16	39	1.5%	100	2.6	2,693	3,074	24	7	19	50	1.6%	123	2.5	3,197
South Leg Volumes																		
Approach	1,308	4	3	5	12		31		1,339	2,011	12	3	10	25		62		2,073
Depart	1,698	10	4	5	19		45		1,743	1,588	11	2	4	17		39		1,627
Total	3,006	14	7	10	31	1.0%	76	2.5	3,082	3,599	23	5	14	42	1.2%	101	2.4	3,700
East Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	432	1	0	0	1		2		434	621	5	1	2	8		19		640
Total	432	1	0	0	1	0.2%	2	2.0	434	621	5	1	2	8	1.3%	19	2.4	640
West Leg Volumes																		
Approach	534	5	4	8	17		44		578	649	6	2	8	16		41		690
Depart	321	1	3	0	4		10		331	381	6	1	1	8		18		399
Total	855	6	7	8	21	2.4%	54	2.6	909	1,030	12	3	9	24	2.3%	59	2.5	1,089
All Legs																		
Approach	3,443	17	12	17	46		116		3,559	4,162	32	8	22	62		151		4,313
Depart	3,443	17	12	17	46		116		3,559	4,162	32	8	22	62		151		4,313
Total	6,886	34	24	34	92	1.3%	232	2.5	7,118	8,324	64	16	44	124	1.5%	302	2.4	8,626

Int	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
2	0	698	376	0	1099	245	0	0	0	5	0	37	Sierra Avenue at SR-210 WB Ramp
3	0	905	434	0	1311	331	146	0	432	0	0	0	Sierra Avenue at SR-210 EB Ramp

Int	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
2	0	1188	548	0	1141	308	0	0	0	388	0	468	Sierra Avenue at SR-210 WB Ramp
3	0	1433	640	0	1151	399	214	0	476	0	0	0	Sierra Avenue at SR-210 EB Ramp

APPENDIX C

INTERSECTION ANALYSIS WORKSHEETS

Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_AM.vistro
Report File: K:\...\1 EX AM.pdf

Scenario 1 EX AM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.241	7.3	A
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.403	13.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.241

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	698	376	0	1099	245	0	0	0	5	0	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	698	376	0	1099	245	0	0	0	5	0	37
Peak Hour Factor	1.0000	0.9300	0.9700	1.0000	0.9300	0.9700	1.0000	1.0000	1.0000	0.9300	1.0000	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	188	97	0	295	63	0	0	0	1	0	10
Total Analysis Volume [veh/h]	0	751	388	0	1182	253	0	0	0	5	0	40
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	63	0	0	63	0	0	0	0	27	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59		23	23	23
g / C, Green / Cycle	0.66	0.66		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.15	0.23		0.00	0.01	0.01
s, saturation flow rate [veh/h]	5176	5176		1810	1615	1615
c, Capacity [veh/h]	3393	3393		462	413	413
d1, Uniform Delay [s]	6.25	6.92		25.01	25.25	25.25
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.28		0.04	0.22	0.22
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.35		0.01	0.05	0.05
d, Delay for Lane Group [s/veh]	6.40	7.20		25.05	25.47	25.47
Lane Group LOS	A	A		C	C	C
Critical Lane Group	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.72	3.01		0.08	0.34	0.34
50th-Percentile Queue Length [ft/ln]	43.11	75.33		2.11	8.60	8.60
95th-Percentile Queue Length [veh/ln]	3.10	5.42		0.15	0.62	0.62
95th-Percentile Queue Length [ft/ln]	77.59	135.60		3.79	15.48	15.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.40	0.00	0.00	7.20	0.00	0.00	0.00	0.00	25.05	0.00	25.47
Movement LOS		A			A					C		C
d_A, Approach Delay [s/veh]	6.40			7.20			0.00			25.43		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	7.31											
Intersection LOS	A											
Intersection V/C	0.241											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.865	2.870	1.425	2.144
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1311	1311	0	0
d_b, Bicycle Delay [s]	5.34	5.34	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	1.973	2.210	4.132	4.207
Bicycle LOS	A	B	D	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	905	434	0	1311	331	146	0	432	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	905	434	0	1311	331	146	0	432	0	0	0
Peak Hour Factor	1.0000	0.9600	0.9500	1.0000	0.9600	0.9500	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	236	114	0	341	87	38	0	113	0	0	0
Total Analysis Volume [veh/h]	0	943	457	0	1366	348	152	0	450	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	58	0	0	58	0	32	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	54	54	28	28	28	
g / C, Green / Cycle	0.60	0.60	0.31	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.18	0.26	0.08	0.14	0.14	
s, saturation flow rate [veh/h]	5176	5176	1810	1615	1615	
c, Capacity [veh/h]	3105	3105	563	502	502	
d1, Uniform Delay [s]	8.80	9.78	23.31	24.81	24.81	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.25	0.45	1.18	2.87	2.87	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.30	0.44	0.27	0.45	0.45	
d, Delay for Lane Group [s/veh]	9.06	10.24	24.49	27.68	27.68	
Lane Group LOS	A	B	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	2.81	4.53	2.56	4.15	4.15	
50th-Percentile Queue Length [ft/ln]	70.19	113.31	64.09	103.73	103.73	
95th-Percentile Queue Length [veh/ln]	5.05	8.02	4.61	7.47	7.47	
95th-Percentile Queue Length [ft/ln]	126.35	200.60	115.36	186.71	186.71	

Movement, Approach, & Intersection Results

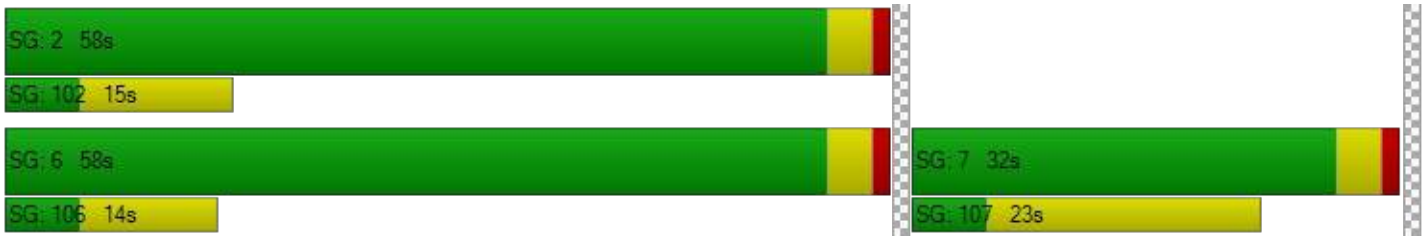
d_M, Delay for Movement [s/veh]	0.00	9.06	0.00	0.00	10.24	0.00	24.49	0.00	27.68	0.00	0.00	0.00
Movement LOS		A			B		C		C			
d_A, Approach Delay [s/veh]		9.06			10.24			26.88			0.00	
Approach LOS		A			B			C			A	
d_I, Intersection Delay [s/veh]						13.30						
Intersection LOS						B						
Intersection V/C						0.403						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.980	2.938	2.279	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	1200	0	0
d_b, Bicycle Delay [s]	7.20	7.20	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.078	2.311	5.126	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_PM.vistro
Report File: K:\...\1 EX PM.pdf

Scenario 1 EX PM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.415	16.2	B
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.446	14.3	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.415

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	1188	548	0	1141	308	0	0	0	388	0	468
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1188	548	0	1141	308	0	0	0	388	0	468
Peak Hour Factor	1.0000	0.9700	0.9700	1.0000	0.9700	0.9700	1.0000	1.0000	1.0000	0.9700	1.0000	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	306	141	0	294	79	0	0	0	100	0	121
Total Analysis Volume [veh/h]	0	1225	565	0	1176	318	0	0	0	400	0	482
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	0	51	0	0	0	0	39	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47		35	35	35
g / C, Green / Cycle	0.52	0.52		0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.24	0.23		0.17	0.17	0.18
s, saturation flow rate [veh/h]	5176	5176		1810	1676	1615
c, Capacity [veh/h]	2703	2703		704	652	628
d1, Uniform Delay [s]	13.46	13.29		20.16	20.36	20.46
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.51		1.90	2.23	2.41
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.44		0.43	0.45	0.46
d, Delay for Lane Group [s/veh]	14.01	13.80		22.05	22.59	22.87
Lane Group LOS	B	B		C	C	C
Critical Lane Group	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.98	4.72		4.84	4.80	4.78
50th-Percentile Queue Length [ft/ln]	124.62	118.10		121.03	119.93	119.40
95th-Percentile Queue Length [veh/ln]	8.65	8.29		8.45	8.39	8.36
95th-Percentile Queue Length [ft/ln]	216.15	207.21		211.24	209.74	209.00

Movement, Approach, & Intersection Results

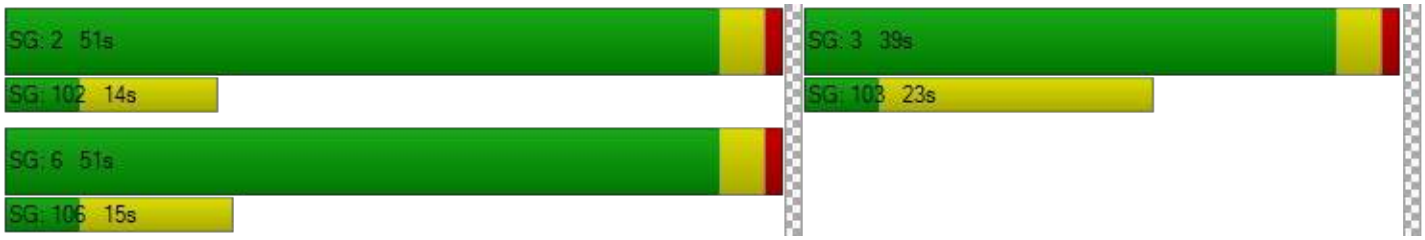
d_M, Delay for Movement [s/veh]	0.00	14.01	0.00	0.00	13.80	0.00	0.00	0.00	0.00	22.19	0.00	22.76
Movement LOS		B			B					C		C
d_A, Approach Delay [s/veh]	14.01			13.80			0.00			22.50		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	16.22											
Intersection LOS	B											
Intersection V/C	0.415											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.986	2.997	1.425	2.348
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1044	1044	0	0
d_b, Bicycle Delay [s]	10.27	10.27	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.233	2.206	4.132	5.588
Bicycle LOS	B	B	D	F

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1433	640	0	1151	399	214	0	476	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1433	640	0	1151	399	214	0	476	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	377	168	0	303	105	56	0	125	0	0	0
Total Analysis Volume [veh/h]	0	1508	674	0	1212	420	225	0	501	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	57	0	0	57	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	53	53	29	29	29	
g / C, Green / Cycle	0.59	0.59	0.32	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.23	0.12	0.16	0.16	
s, saturation flow rate [veh/h]	5176	5176	1810	1615	1615	
c, Capacity [veh/h]	3048	3048	583	520	520	
d1, Uniform Delay [s]	10.73	9.93	23.61	24.47	24.47	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.58	0.39	1.93	3.17	3.17	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.49	0.40	0.39	0.48	0.48	
d, Delay for Lane Group [s/veh]	11.31	10.32	25.53	27.63	27.63	
Lane Group LOS	B	B	C	C	C	
Critical Lane Group	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	5.41	4.01	3.92	4.63	4.63	
50th-Percentile Queue Length [ft/ln]	135.19	100.26	98.12	115.66	115.66	
95th-Percentile Queue Length [veh/ln]	9.22	7.22	7.06	8.15	8.15	
95th-Percentile Queue Length [ft/ln]	230.53	180.46	176.62	203.85	203.85	

Movement, Approach, & Intersection Results

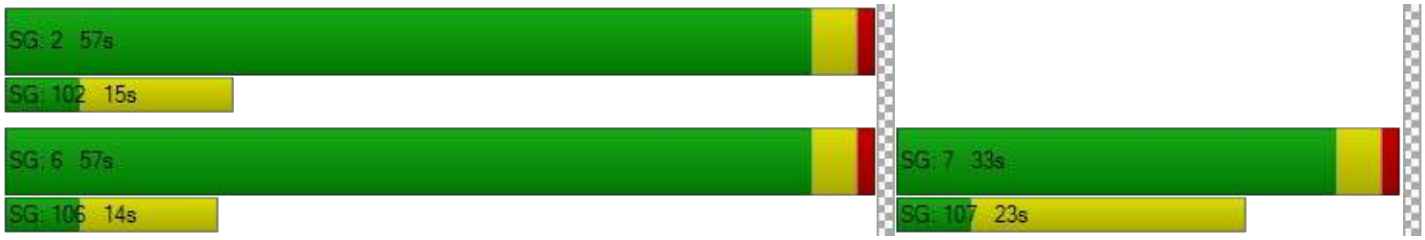
d_M, Delay for Movement [s/veh]	0.00	11.31	0.00	0.00	10.32	0.00	25.53	0.00	27.63	0.00	0.00	0.00
Movement LOS		B			B		C		C			
d_A, Approach Delay [s/veh]		11.31			10.32		26.98			0.00		
Approach LOS		B			B		C			A		
d_I, Intersection Delay [s/veh]	14.26											
Intersection LOS	B											
Intersection V/C	0.446											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.044	3.006	2.310	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1178	1178	0	0
d_b, Bicycle Delay [s]	7.61	7.61	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.389	2.226	5.330	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_AM.vistro
Report File: K:\...\2 EX WP AM.pdf

Scenario 2 EX WP AM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Two-way stop	HCM 6th Edition	WB Left	0.294	47.4	E
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.247	7.5	A
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.404	13.4	B
4	Sierra Ave / North Dwy	Two-way stop	HCM 6th Edition	WB Left	0.017	26.2	D
5	Sierra Ave / South Dwy	Two-way stop	HCM 6th Edition	WB Left	0.048	27.5	D
6	Casa Grande Dr / West Dwy	Two-way stop	HCM 6th Edition	SB Right	0.006	8.7	A
7	Casa Grande Dr / East Dwy	Two-way stop	HCM 6th Edition	SB Right	0.002	8.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Two-way stop	Delay (sec / veh):	47.4
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.294

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		Casa Grande Drive	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		Casa Grande Drive	
Base Volume Input [veh/h]	414	28	54	833	25	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	22	3	9	7	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	445	50	57	842	32	50
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	121	14	15	229	9	14
Total Analysis Volume [veh/h]	484	54	62	915	35	54
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.06	0.01	0.29	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	8.68	0.00	47.37	12.02
Movement LOS	A	A	A	A	E	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.19	0.00	1.13	0.31
95th-Percentile Queue Length [ft/ln]	0.00	0.00	4.75	0.00	28.20	7.86
d_A, Approach Delay [s/veh]	0.00		0.55		25.92	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.77					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.247

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	698	376	0	1099	245	0	0	0	5	0	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	0	0	8	6	0	0	0	0	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	732	376	0	1107	251	0	0	0	5	0	52
Peak Hour Factor	1.0000	0.9300	0.9700	1.0000	0.9300	0.9700	1.0000	1.0000	1.0000	0.9300	1.0000	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	197	97	0	298	65	0	0	0	1	0	14
Total Analysis Volume [veh/h]	0	787	388	0	1190	259	0	0	0	5	0	56
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	63	0	0	63	0	0	0	0	27	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59		23	23	23
g / C, Green / Cycle	0.66	0.66		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.15	0.23		0.00	0.02	0.02
s, saturation flow rate [veh/h]	5176	5176		1810	1615	1615
c, Capacity [veh/h]	3393	3393		462	413	413
d1, Uniform Delay [s]	6.30	6.93		25.01	25.38	25.38
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.29		0.04	0.32	0.32
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.35		0.01	0.07	0.07
d, Delay for Lane Group [s/veh]	6.46	7.22		25.05	25.70	25.70
Lane Group LOS	A	A		C	C	C
Critical Lane Group	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.82	3.04		0.08	0.48	0.48
50th-Percentile Queue Length [ft/ln]	45.55	76.00		2.11	12.11	12.11
95th-Percentile Queue Length [veh/ln]	3.28	5.47		0.15	0.87	0.87
95th-Percentile Queue Length [ft/ln]	81.99	136.79		3.79	21.80	21.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.46	0.00	0.00	7.22	0.00	0.00	0.00	0.00	25.05	0.00	25.70
Movement LOS		A			A					C		C
d_A, Approach Delay [s/veh]	6.46			7.22			0.00			25.64		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	7.48											
Intersection LOS	A											
Intersection V/C	0.247											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.871	2.879	1.425	2.147
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1311	1311	0	0
d_b, Bicycle Delay [s]	5.34	5.34	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	1.992	2.214	4.132	4.233
Bicycle LOS	A	B	D	D

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	905	434	0	1311	331	146	0	432	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	0	3	5	17	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	922	434	0	1314	336	163	0	432	0	0	0
Peak Hour Factor	1.0000	0.9600	0.9500	1.0000	0.9600	0.9500	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	240	114	0	342	88	42	0	113	0	0	0
Total Analysis Volume [veh/h]	0	960	457	0	1369	354	170	0	450	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	58	0	0	58	0	32	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	54	54	28	28	28	
g / C, Green / Cycle	0.60	0.60	0.31	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.19	0.26	0.09	0.14	0.14	
s, saturation flow rate [veh/h]	5176	5176	1810	1615	1615	
c, Capacity [veh/h]	3105	3105	563	502	502	
d1, Uniform Delay [s]	8.84	9.79	23.57	24.81	24.81	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.26	0.46	1.38	2.87	2.87	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.31	0.44	0.30	0.45	0.45	
d, Delay for Lane Group [s/veh]	9.10	10.25	24.95	27.68	27.68	
Lane Group LOS	A	B	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	2.87	4.55	2.91	4.15	4.15	
50th-Percentile Queue Length [ft/ln]	71.75	113.65	72.64	103.73	103.73	
95th-Percentile Queue Length [veh/ln]	5.17	8.04	5.23	7.47	7.47	
95th-Percentile Queue Length [ft/ln]	129.16	201.07	130.75	186.71	186.71	

Movement, Approach, & Intersection Results

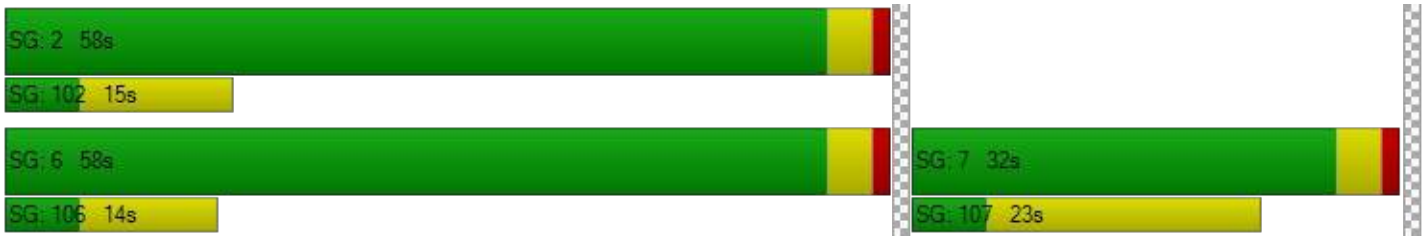
d_M, Delay for Movement [s/veh]	0.00	9.10	0.00	0.00	10.25	0.00	24.95	0.00	27.68	0.00	0.00	0.00
Movement LOS		A			B		C		C			
d_A, Approach Delay [s/veh]		9.10			10.25			26.93			0.00	
Approach LOS		A			B			C			A	
d_I, Intersection Delay [s/veh]						13.38						
Intersection LOS						B						
Intersection V/C						0.404						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.982	2.943	2.284	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	1200	0	0
d_b, Bicycle Delay [s]	7.20	7.20	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.088	2.313	5.155	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave / North Dwy

Control Type:	Two-way stop	Delay (sec / veh):	26.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Base Volume Input [veh/h]	414	0	0	833	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	9	0	2	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	415	9	0	835	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	2	0	220	1	0
Total Analysis Volume [veh/h]	437	9	0	879	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.23	0.00	26.19	11.21
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	1.32	1.32
d_A, Approach Delay [s/veh]	0.00		0.00		26.19	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 5: Sierra Ave / South Dwy

Control Type:	Two-way stop	Delay (sec / veh):	27.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.048

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Base Volume Input [veh/h]	414	0	0	833	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	26	0	5	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	424	26	0	838	8	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	112	7	0	221	2	0
Total Analysis Volume [veh/h]	446	27	0	882	8	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.05	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.31	0.00	27.51	12.05
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.72	3.72
d_A, Approach Delay [s/veh]	0.00		0.00		27.51	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.16					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 6: Casa Grande Dr / West Dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	72	70	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	25	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	0	97	76	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	0	26	20	0
Total Analysis Volume [veh/h]	0	6	0	102	80	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.70	0.00	0.00	0.00	0.00
Movement LOS		A		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.46	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.70		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.28					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Casa Grande Dr / East Dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	East Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	East Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	72	70	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	24	1	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	24	73	74	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	6	19	19	0
Total Analysis Volume [veh/h]	0	2	25	77	78	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.68	8.67	7.41	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.05	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.15	0.15	1.25	1.25	0.00	0.00
d_A, Approach Delay [s/veh]	8.67		1.82		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.11					
Intersection LOS	A					

Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_PM.vistro
Report File: K:\...\2 EX WP PM.pdf

Scenario 2 EX WP PM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Two-way stop	HCM 6th Edition	WB Left	0.401	45.6	E
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.420	16.3	B
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.448	14.3	B
4	Sierra Ave / North Dwy	Two-way stop	HCM 6th Edition	WB Left	0.047	24.7	C
5	Sierra Ave / South Dwy	Two-way stop	HCM 6th Edition	WB Left	0.155	27.7	D
6	Casa Grande Dr / West Dwy	Two-way stop	HCM 6th Edition	SB Right	0.020	8.7	A
7	Casa Grande Dr / East Dwy	Two-way stop	HCM 6th Edition	SB Right	0.006	8.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Two-way stop	Delay (sec / veh):	45.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.401

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		Casa Grande Drive	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		Casa Grande Drive	
Base Volume Input [veh/h]	717	40	26	461	31	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	8	5	33	22	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	730	48	31	494	53	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	198	13	8	134	14	7
Total Analysis Volume [veh/h]	793	52	34	537	58	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.04	0.01	0.40	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	9.70	0.00	45.61	15.21
Movement LOS	A	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.13	0.00	1.73	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	3.32	0.00	43.27	5.50
d_A, Approach Delay [s/veh]	0.00		0.58		36.20	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	2.25					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.420

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	1188	548	0	1141	308	0	0	0	388	0	468
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	0	33	18	0	0	0	0	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1201	548	0	1174	326	0	0	0	388	0	474
Peak Hour Factor	1.0000	0.9700	0.9700	1.0000	0.9700	0.9700	1.0000	1.0000	1.0000	0.9700	1.0000	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	310	141	0	303	84	0	0	0	100	0	122
Total Analysis Volume [veh/h]	0	1238	565	0	1210	336	0	0	0	400	0	489
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	0	51	0	0	0	0	39	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47		35	35	35
g / C, Green / Cycle	0.52	0.52		0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.24	0.23		0.17	0.18	0.18
s, saturation flow rate [veh/h]	5176	5176		1810	1674	1615
c, Capacity [veh/h]	2703	2703		704	651	628
d1, Uniform Delay [s]	13.50	13.41		20.18	20.40	20.50
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.54		1.92	2.27	2.45
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.45		0.43	0.45	0.46
d, Delay for Lane Group [s/veh]	14.06	13.95		22.10	22.67	22.96
Lane Group LOS	B	B		C	C	C
Critical Lane Group	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.05	4.90		4.88	4.85	4.83
50th-Percentile Queue Length [ft/ln]	126.37	122.60		122.01	121.20	120.82
95th-Percentile Queue Length [veh/ln]	8.74	8.54		8.50	8.46	8.44
95th-Percentile Queue Length [ft/ln]	218.55	213.40		212.59	211.47	210.95

Movement, Approach, & Intersection Results

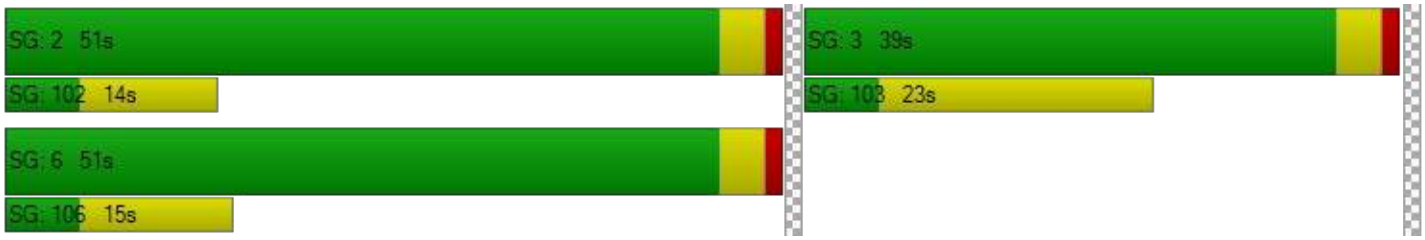
d_M, Delay for Movement [s/veh]	0.00	14.06	0.00	0.00	13.95	0.00	0.00	0.00	0.00	22.24	0.00	22.84
Movement LOS		B			B					C		C
d_A, Approach Delay [s/veh]	14.06			13.95			0.00			22.57		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	16.29											
Intersection LOS	B											
Intersection V/C	0.420											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.992	3.004	1.425	2.349
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1044	1044	0	0
d_b, Bicycle Delay [s]	10.27	10.27	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.241	2.225	4.132	5.599
Bicycle LOS	B	B	D	F

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1433	640	0	1151	399	214	0	476	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	17	16	6	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1440	640	0	1168	415	220	0	476	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	379	168	0	307	109	58	0	125	0	0	0
Total Analysis Volume [veh/h]	0	1516	674	0	1229	437	232	0	501	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	57	0	0	57	0	33	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	53	53	29	29	29	
g / C, Green / Cycle	0.59	0.59	0.32	0.32	0.32	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.24	0.13	0.16	0.16	
s, saturation flow rate [veh/h]	5176	5176	1810	1615	1615	
c, Capacity [veh/h]	3048	3048	583	520	520	
d1, Uniform Delay [s]	10.76	9.97	23.71	24.47	24.47	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.58	0.40	2.02	3.17	3.17	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.50	0.40	0.40	0.48	0.48	
d, Delay for Lane Group [s/veh]	11.34	10.37	25.74	27.63	27.63	
Lane Group LOS	B	B	C	C	C	
Critical Lane Group	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	5.45	4.08	4.07	4.63	4.63	
50th-Percentile Queue Length [ft/ln]	136.21	102.11	101.74	115.66	115.66	
95th-Percentile Queue Length [veh/ln]	9.28	7.35	7.33	8.15	8.15	
95th-Percentile Queue Length [ft/ln]	231.91	183.81	183.14	203.85	203.85	

Movement, Approach, & Intersection Results

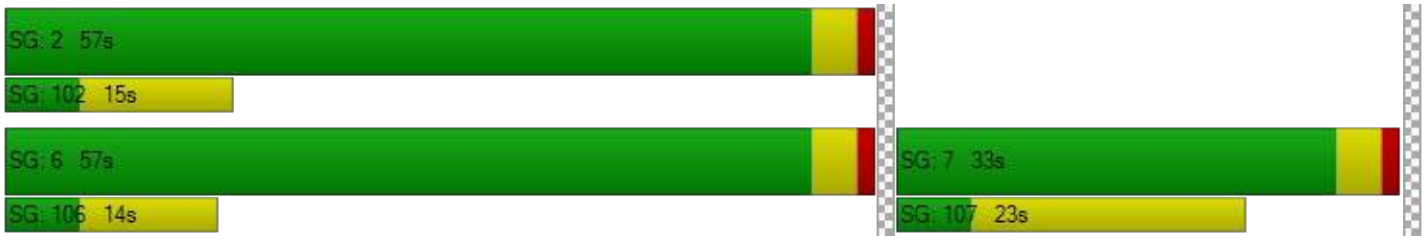
d_M, Delay for Movement [s/veh]	0.00	11.34	0.00	0.00	10.37	0.00	25.74	0.00	27.63	0.00	0.00	0.00
Movement LOS		B			B		C		C			
d_A, Approach Delay [s/veh]		11.34			10.37		27.03			0.00		
Approach LOS		B			B		C			A		
d_I, Intersection Delay [s/veh]	14.31											
Intersection LOS	B											
Intersection V/C	0.448											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.048	3.010	2.311	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1178	1178	0	0
d_b, Bicycle Delay [s]	7.61	7.61	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.393	2.236	5.342	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave / North Dwy

Control Type:	Two-way stop	Delay (sec / veh):	24.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.047

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Base Volume Input [veh/h]	717	0	0	461	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	3	0	1	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	720	3	0	462	9	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	189	1	0	122	2	0
Total Analysis Volume [veh/h]	758	3	0	486	9	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.05	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	9.23	0.00	24.68	14.78
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.67	3.67
d_A, Approach Delay [s/veh]	0.00		0.00		24.68	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.18					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 5: Sierra Ave / South Dwy

Control Type:	Two-way stop	Delay (sec / veh):	27.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.155

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Base Volume Input [veh/h]	717	0	0	461	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	11	0	10	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	723	11	0	471	28	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	190	3	0	124	7	0
Total Analysis Volume [veh/h]	761	12	0	496	29	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.15	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	9.27	0.00	27.71	17.44
Movement LOS	A	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.54	0.54
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	13.38	13.38
d_A, Approach Delay [s/veh]	0.00		0.00		27.71	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.62					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 6: Casa Grande Dr / West Dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	66	51	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	19	0	13	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	19	0	79	58	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	5	0	21	15	0
Total Analysis Volume [veh/h]	0	20	0	83	61	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.66	7.33	0.00	0.00	0.00
Movement LOS		A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.52	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.66		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.06					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Casa Grande Dr / East Dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name			Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name			Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	66	51	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	9	4	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	9	70	52	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	2	18	14	0
Total Analysis Volume [veh/h]	0	6	9	74	55	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.31	8.58	7.34	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.45	0.45	0.44	0.44	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.80		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.82					
Intersection LOS	A					

Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_AM.vistro
Report File: K:\...\3 OY CUM AM.pdf

Scenario 3 OY CUM AM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.606	11.9	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.315	8.4	A
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.431	14.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.606

Intersection Setup

Name	Sierra Avenue			Sierra Avenue							Casa Grande Drive		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			No				Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue							Casa Grande Drive		
Base Volume Input [veh/h]	0	414	28	0	54	833	0	0	0	0	25	0	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.000	1.040	1.040	1.040	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	30	94	109	0	9	59	15	30	30	60	55	15	3
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	525	138	0	65	925	15	30	30	60	81	15	50
Peak Hour Factor	0.9200	0.9200	0.9200	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	143	38	0	18	251	4	8	8	16	22	4	14
Total Analysis Volume [veh/h]	33	571	150	0	71	1005	16	33	33	65	88	16	54
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permi	Permi	Permi	Permi	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No			No			No	
Maximum Recall		No				No			No			No	
Pedestrian Recall		No				No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.39	0.10	0.54	0.02	0.06	0.07	0.04
s, saturation flow rate [veh/h]	552	1833	743	1895	1330	1674	1318	1646
c, Capacity [veh/h]	367	1446	548	1495	161	205	140	201
d1, Uniform Delay [s]	11.03	3.31	6.82	4.35	40.69	36.83	43.61	36.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	1.23	0.49	2.55	2.85	7.83	19.55	4.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.50	0.13	0.68	0.20	0.48	0.63	0.35
d, Delay for Lane Group [s/veh]	11.51	4.54	7.31	6.90	43.54	44.65	63.16	40.91
Lane Group LOS	B	A	A	A	D	D	E	D
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.37	3.34	0.57	6.36	0.82	2.43	2.71	1.66
50th-Percentile Queue Length [ft/ln]	9.23	83.49	14.36	158.95	20.61	60.72	67.64	41.40
95th-Percentile Queue Length [veh/ln]	0.66	6.01	1.03	10.49	1.48	4.37	4.87	2.98
95th-Percentile Queue Length [ft/ln]	16.62	150.29	25.85	262.34	37.10	109.30	121.76	74.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.51	4.54	4.54	7.31	7.31	6.90	6.90	43.54	44.65	44.65	63.16	40.91	40.91
Movement LOS	B	A	A	A	A	A	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	4.84			6.93				44.37			53.30		
Approach LOS	A			A				D			D		
d_I, Intersection Delay [s/veh]	11.92												
Intersection LOS	B												
Intersection V/C	0.606												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.052	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	2.804	3.244	1.776	1.820
Bicycle LOS	C	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.315

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	698	376	0	1099	245	0	0	0	5	0	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0000	1.0000	1.0400	1.0000	1.0400
In-Process Volume [veh/h]	0	118	0	0	187	125	0	0	0	0	0	79
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	844	391	0	1330	380	0	0	0	5	0	117
Peak Hour Factor	1.0000	0.9300	0.9700	1.0000	0.9300	0.9700	1.0000	1.0000	1.0000	0.9300	1.0000	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	227	101	0	358	98	0	0	0	1	0	31
Total Analysis Volume [veh/h]	0	908	403	0	1430	392	0	0	0	5	0	126
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	63	0	0	63	0	0	0	0	27	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59		23	23	23
g / C, Green / Cycle	0.66	0.66		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.18	0.28		0.00	0.04	0.04
s, saturation flow rate [veh/h]	5176	5176		1810	1615	1615
c, Capacity [veh/h]	3393	3393		462	413	413
d1, Uniform Delay [s]	6.47	7.38		25.01	25.95	25.95
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.39		0.04	0.78	0.78
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.42		0.01	0.15	0.15
d, Delay for Lane Group [s/veh]	6.67	7.76		25.05	26.74	26.74
Lane Group LOS	A	A		C	C	C
Critical Lane Group	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.16	3.89		0.08	1.12	1.12
50th-Percentile Queue Length [ft/ln]	54.08	97.33		2.11	28.02	28.02
95th-Percentile Queue Length [veh/ln]	3.89	7.01		0.15	2.02	2.02
95th-Percentile Queue Length [ft/ln]	97.34	175.20		3.79	50.44	50.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.67	0.00	0.00	7.76	0.00	0.00	0.00	0.00	25.05	0.00	26.74
Movement LOS		A			A					C		C
d_A, Approach Delay [s/veh]	6.67			7.76			0.00			26.67		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	8.36											
Intersection LOS	A											
Intersection V/C	0.315											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.922	2.939	1.425	2.165
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1311	1311	0	0
d_b, Bicycle Delay [s]	5.34	5.34	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.059	2.346	4.132	4.349
Bicycle LOS	B	B	D	E

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	905	434	0	1311	331	146	0	432	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	30	0	0	60	128	88	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	971	451	0	1423	472	240	0	449	0	0	0
Peak Hour Factor	1.0000	0.9600	0.9500	1.0000	0.9600	0.9500	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	253	119	0	371	124	63	0	117	0	0	0
Total Analysis Volume [veh/h]	0	1011	475	0	1482	497	250	0	468	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	58	0	0	58	0	32	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	54	54	28	28	28	
g / C, Green / Cycle	0.60	0.60	0.31	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.29	0.14	0.14	0.14	
s, saturation flow rate [veh/h]	5176	5176	1810	1615	1615	
c, Capacity [veh/h]	3105	3105	563	502	502	
d1, Uniform Delay [s]	8.95	10.09	24.78	24.97	24.97	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.28	0.53	2.53	3.08	3.08	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.33	0.48	0.44	0.47	0.47	
d, Delay for Lane Group [s/veh]	9.23	10.62	27.31	28.06	28.06	
Lane Group LOS	A	B	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	3.06	5.08	4.55	4.35	4.35	
50th-Percentile Queue Length [ft/ln]	76.51	126.94	113.86	108.85	108.85	
95th-Percentile Queue Length [veh/ln]	5.51	8.77	8.05	7.78	7.78	
95th-Percentile Queue Length [ft/ln]	137.72	219.32	201.36	194.40	194.40	

Movement, Approach, & Intersection Results

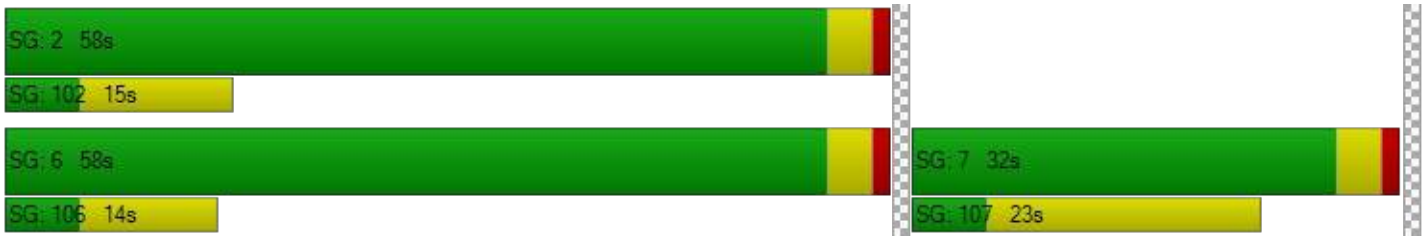
d_M, Delay for Movement [s/veh]	0.00	9.23	0.00	0.00	10.62	0.00	27.34	0.00	28.06	0.00	0.00	0.00
Movement LOS		A			B		C		C			
d_A, Approach Delay [s/veh]		9.23			10.62			27.80			0.00	
Approach LOS		A			B			C			A	
d_I, Intersection Delay [s/veh]						14.02						
Intersection LOS						B						
Intersection V/C						0.431						

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.008	2.977	2.308	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	1200	0	0
d_b, Bicycle Delay [s]	7.20	7.20	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.116	2.375	5.317	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_PM.vistro
Report File: K:\...\3 OY CUM PM.pdf

Scenario 3 OY CUM PM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.591	10.0	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.507	17.5	B
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.501	15.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

Intersection Setup

Name	Sierra Avenue			Sierra Avenue							Casa Grande Drive		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			No				Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue							Casa Grande Drive		
Base Volume Input [veh/h]	0	717	40	0	26	461	0	0	0	0	31	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.000	1.040	1.040	1.040	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	66	76	75	0	4	104	33	21	21	42	20	33	9
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	822	117	0	31	583	33	21	21	42	52	33	30
Peak Hour Factor	0.9200	0.9200	0.9200	1.000	0.920	0.920	0.920	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	223	32	0	8	158	9	6	6	11	14	9	8
Total Analysis Volume [veh/h]	72	893	127	0	34	634	36	23	23	46	57	36	33
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permi	Permi	Permi	Permi	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No				No			No			No	
Maximum Recall		No				No			No			No	
Pedestrian Recall		No				No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.09	0.55	0.06	0.36	0.02	0.04	0.04	0.04
s, saturation flow rate [veh/h]	767	1859	562	1882	1332	1673	1353	1724
c, Capacity [veh/h]	579	1467	366	1485	164	204	164	211
d1, Uniform Delay [s]	6.08	4.44	11.50	3.11	40.17	36.16	41.31	36.12
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	2.75	0.50	0.99	1.77	4.42	5.72	4.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.70	0.09	0.45	0.14	0.34	0.35	0.33
d, Delay for Lane Group [s/veh]	6.53	7.19	12.00	4.11	41.94	40.58	47.03	40.22
Lane Group LOS	A	A	B	A	D	D	D	D
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.54	6.53	0.39	2.90	0.56	1.62	1.48	1.61
50th-Percentile Queue Length [ft/ln]	13.43	163.21	9.75	72.49	14.04	40.57	37.11	40.25
95th-Percentile Queue Length [veh/ln]	0.97	10.72	0.70	5.22	1.01	2.92	2.67	2.90
95th-Percentile Queue Length [ft/ln]	24.17	267.97	17.55	130.48	25.26	73.02	66.79	72.45

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.53	7.19	7.19	12.00	12.00	4.11	4.11	41.94	40.58	40.58	47.03	40.22	40.22
Movement LOS	A	A	A	B	B	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.15			4.49				40.92			43.30		
Approach LOS	A			A				D			D		
d_I, Intersection Delay [s/veh]	10.02												
Intersection LOS	B												
Intersection V/C	0.591												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.121	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	3.361	2.665	1.711	1.768
Bicycle LOS	C	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.507

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	1188	548	0	1141	308	0	0	0	388	0	468
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0000	1.0000	1.0400	1.0000	1.0400
In-Process Volume [veh/h]	0	209	0	0	152	102	0	0	0	0	0	139
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1445	570	0	1339	422	0	0	0	404	0	626
Peak Hour Factor	1.0000	0.9700	0.9700	1.0000	0.9700	0.9700	1.0000	1.0000	1.0000	0.9700	1.0000	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	372	147	0	345	109	0	0	0	104	0	161
Total Analysis Volume [veh/h]	0	1490	588	0	1380	435	0	0	0	416	0	645
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	0	51	0	0	0	0	39	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47		35	35	35
g / C, Green / Cycle	0.52	0.52		0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.29	0.27		0.20	0.21	0.22
s, saturation flow rate [veh/h]	5176	5176		1810	1646	1615
c, Capacity [veh/h]	2703	2703		704	640	628
d1, Uniform Delay [s]	14.43	14.01		20.89	21.40	21.52
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	0.69		2.56	3.41	3.63
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.51		0.50	0.55	0.56
d, Delay for Lane Group [s/veh]	15.24	14.70		23.44	24.82	25.14
Lane Group LOS	B	B		C	C	C
Critical Lane Group	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.52	5.86		5.95	6.19	6.24
50th-Percentile Queue Length [ft/ln]	163.08	146.41		148.69	154.74	156.12
95th-Percentile Queue Length [veh/ln]	10.71	9.83		9.95	10.27	10.34
95th-Percentile Queue Length [ft/ln]	267.79	245.63		248.68	256.74	258.58

Movement, Approach, & Intersection Results

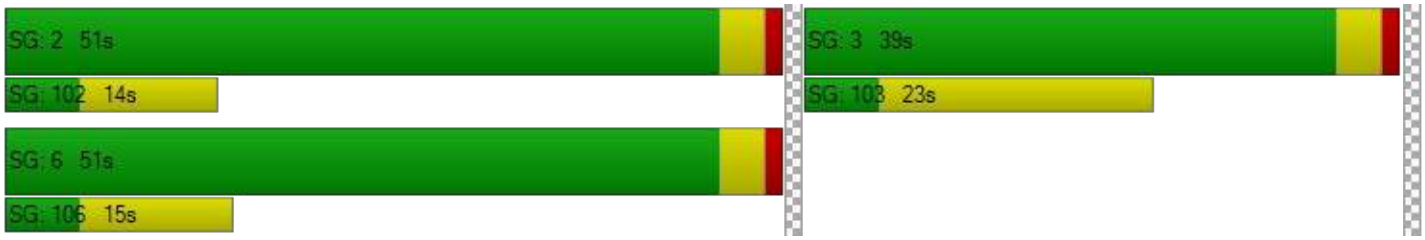
d_M, Delay for Movement [s/veh]	0.00	15.24	0.00	0.00	14.70	0.00	0.00	0.00	0.00	23.65	0.00	25.00
Movement LOS		B			B					C		C
d_A, Approach Delay [s/veh]	15.24			14.70			0.00			24.47		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	17.54											
Intersection LOS	B											
Intersection V/C	0.507											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.053	3.085	1.425	2.391
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1044	1044	0	0
d_b, Bicycle Delay [s]	10.27	10.27	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.379	2.319	4.132	5.883
Bicycle LOS	B	B	D	F

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1433	640	0	1151	399	214	0	476	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	66	0	0	42	110	143	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1556	666	0	1239	525	366	0	495	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	409	175	0	326	138	96	0	130	0	0	0
Total Analysis Volume [veh/h]	0	1638	701	0	1304	553	385	0	521	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	56	0	0	56	0	34	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	52	52	30	30	30	
g / C, Green / Cycle	0.58	0.58	0.33	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.25	0.17	0.18	0.18	
s, saturation flow rate [veh/h]	5176	5176	1810	1661	1615	
c, Capacity [veh/h]	2990	2990	603	554	538	
d1, Uniform Delay [s]	11.74	10.72	24.10	24.42	24.53	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.73	0.46	3.06	3.79	4.06	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.55	0.44	0.51	0.54	0.55	
d, Delay for Lane Group [s/veh]	12.46	11.19	27.16	28.20	28.59	
Lane Group LOS	B	B	C	C	C	
Critical Lane Group	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.33	4.59	5.62	5.64	5.64	
50th-Percentile Queue Length [ft/ln]	158.23	114.66	140.50	140.93	141.12	
95th-Percentile Queue Length [veh/ln]	10.46	8.10	9.51	9.53	9.54	
95th-Percentile Queue Length [ft/ln]	261.38	202.46	237.70	238.27	238.53	

Movement, Approach, & Intersection Results

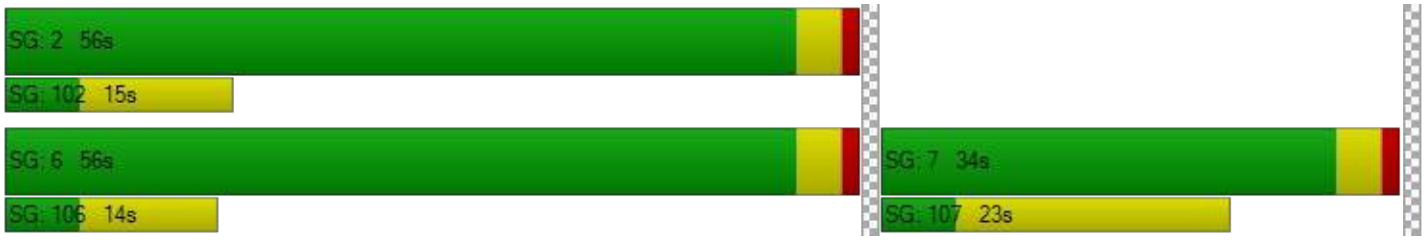
d_M, Delay for Movement [s/veh]	0.00	12.46	0.00	0.00	11.19	0.00	27.38	0.00	28.43	0.00	0.00	0.00
Movement LOS		B			B		C		C			
d_A, Approach Delay [s/veh]	12.46			11.19			27.98			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	15.68											
Intersection LOS	B											
Intersection V/C	0.501											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.078	3.059	2.353	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1156	1156	0	0
d_b, Bicycle Delay [s]	8.02	8.02	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.461	2.277	5.627	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_AM.vistro
Report File: K:\...\4 OY CUM WP AM.pdf

Scenario 4 OY CUM WP AM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.616	12.0	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.322	8.5	A
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.434	14.1	B
4	Sierra Ave / North Dwy	Two-way stop	HCM 6th Edition	WB Left	0.010	17.1	C
5	Sierra Ave / South Dwy	Two-way stop	HCM 6th Edition	WB Left	0.033	20.2	C
6	Casa Grande Dr / West Dwy	Two-way stop	HCM 6th Edition	SB Right	0.007	9.1	A
7	Casa Grande Dr / East Dwy	Two-way stop	HCM 6th Edition	SB Right	0.002	9.1	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

Intersection Setup

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Base Volume Input [veh/h]	0	414	28	54	833	0	0	0	0	25	0	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	30	94	109	9	59	15	30	30	60	55	15	3
Site-Generated Trips [veh/h]	0	31	22	3	9	0	0	0	0	7	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	556	160	68	934	15	30	30	60	88	15	55
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	151	43	18	254	4	8	8	15	24	4	15
Total Analysis Volume [veh/h]	30	604	174	74	1015	15	30	30	60	96	15	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.05	0.43	0.10	0.54	0.02	0.05	0.07	0.05
s, saturation flow rate [veh/h]	548	1828	705	1895	1346	1700	1327	1665
c, Capacity [veh/h]	362	1442	510	1495	159	208	148	203
d1, Uniform Delay [s]	11.18	3.49	7.64	4.39	40.79	36.61	43.39	36.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	1.45	0.60	2.62	2.62	6.46	20.11	5.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.54	0.15	0.69	0.19	0.43	0.65	0.37
d, Delay for Lane Group [s/veh]	11.63	4.94	8.24	7.01	43.41	43.07	63.50	41.38
Lane Group LOS	B	A	A	A	D	D	E	D
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.34	3.82	0.65	6.49	0.75	2.18	2.95	1.78
50th-Percentile Queue Length [ft/ln]	8.45	95.60	16.30	162.19	18.73	54.60	73.69	44.59
95th-Percentile Queue Length [veh/ln]	0.61	6.88	1.17	10.66	1.35	3.93	5.31	3.21
95th-Percentile Queue Length [ft/ln]	15.22	172.08	29.34	266.62	33.72	98.28	132.65	80.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.63	4.94	4.94	8.24	7.01	7.01	43.41	43.07	43.07	63.50	41.38	41.38
Movement LOS	B	A	A	A	A	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	5.19			7.09			43.15			53.80		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	11.99											
Intersection LOS	B											
Intersection V/C	0.616											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.043	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	2.893	3.381	1.758	1.842
Bicycle LOS	C	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	8.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.322

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	698	376	0	1099	245	0	0	0	5	0	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0000	1.0000	1.0000	1.0400	1.0000	1.0400
In-Process Volume [veh/h]	0	118	0	0	187	125	0	0	0	0	0	79
Site-Generated Trips [veh/h]	0	34	0	0	8	6	0	0	0	0	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	878	391	0	1338	386	0	0	0	5	0	132
Peak Hour Factor	1.0000	0.9300	0.9700	1.0000	0.9300	0.9700	1.0000	1.0000	1.0000	0.9300	1.0000	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	236	101	0	360	99	0	0	0	1	0	35
Total Analysis Volume [veh/h]	0	944	403	0	1439	398	0	0	0	5	0	142
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	63	0	0	63	0	0	0	0	27	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59		23	23	23
g / C, Green / Cycle	0.66	0.66		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.18	0.28		0.00	0.04	0.04
s, saturation flow rate [veh/h]	5176	5176		1810	1615	1615
c, Capacity [veh/h]	3393	3393		462	413	413
d1, Uniform Delay [s]	6.53	7.39		25.01	26.09	26.09
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	0.39		0.04	0.90	0.90
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.42		0.01	0.17	0.17
d, Delay for Lane Group [s/veh]	6.73	7.79		25.05	26.99	26.99
Lane Group LOS	A	A		C	C	C
Critical Lane Group	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.27	3.93		0.08	1.27	1.27
50th-Percentile Queue Length [ft/ln]	56.71	98.19		2.11	31.79	31.79
95th-Percentile Queue Length [veh/ln]	4.08	7.07		0.15	2.29	2.29
95th-Percentile Queue Length [ft/ln]	102.07	176.74		3.79	57.22	57.22

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.73	0.00	0.00	7.79	0.00	0.00	0.00	0.00	25.05	0.00	26.99
Movement LOS		A			A					C		C
d_A, Approach Delay [s/veh]	6.73			7.79			0.00			26.92		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	8.51											
Intersection LOS	A											
Intersection V/C	0.322											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.928	2.947	1.425	2.168
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1311	1311	0	0
d_b, Bicycle Delay [s]	5.34	5.34	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.079	2.351	4.132	4.375
Bicycle LOS	B	B	D	E

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	905	434	0	1311	331	146	0	432	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0000	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	30	0	0	60	128	88	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	0	3	5	17	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	988	451	0	1426	477	257	0	449	0	0	0
Peak Hour Factor	1.0000	0.9600	0.9500	1.0000	0.9600	0.9500	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	257	119	0	371	126	67	0	117	0	0	0
Total Analysis Volume [veh/h]	0	1029	475	0	1485	502	268	0	468	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	58	0	0	58	0	32	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	54	54	28	28	28	
g / C, Green / Cycle	0.60	0.60	0.31	0.31	0.31	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.29	0.14	0.15	0.15	
s, saturation flow rate [veh/h]	5176	5176	1810	1621	1615	
c, Capacity [veh/h]	3105	3105	563	504	502	
d1, Uniform Delay [s]	8.99	10.10	24.93	25.04	25.05	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.29	0.53	2.70	3.16	3.18	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.33	0.48	0.46	0.47	0.47	
d, Delay for Lane Group [s/veh]	9.27	10.63	27.63	28.21	28.23	
Lane Group LOS	A	B	C	C	C	
Critical Lane Group	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.13	5.09	4.76	4.46	4.45	
50th-Percentile Queue Length [ft/ln]	78.22	127.30	119.08	111.40	111.14	
95th-Percentile Queue Length [veh/ln]	5.63	8.79	8.34	7.92	7.90	
95th-Percentile Queue Length [ft/ln]	140.80	219.82	208.56	197.95	197.58	

Movement, Approach, & Intersection Results

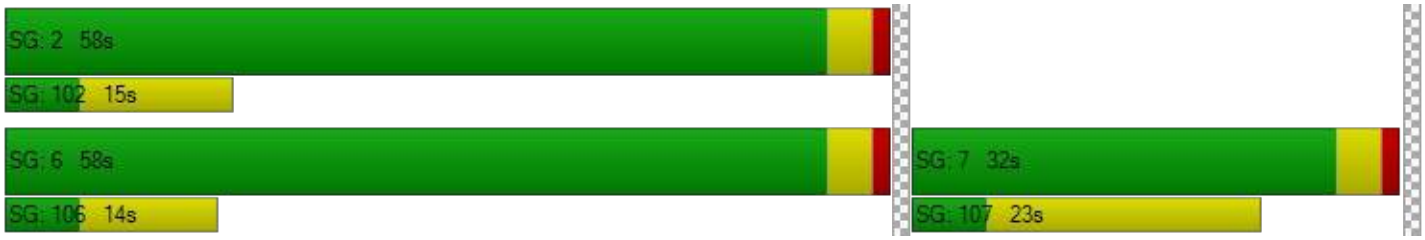
d_M, Delay for Movement [s/veh]	0.00	9.27	0.00	0.00	10.63	0.00	27.67	0.00	28.22	0.00	0.00	0.00
Movement LOS		A			B		C		C			
d_A, Approach Delay [s/veh]		9.27			10.63		28.01			0.00		
Approach LOS		A			B		C			A		
d_I, Intersection Delay [s/veh]	14.14											
Intersection LOS	B											
Intersection V/C	0.434											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.011	2.983	2.312	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	1200	0	0
d_b, Bicycle Delay [s]	7.20	7.20	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.126	2.376	5.347	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave / North Dwy

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Base Volume Input [veh/h]	414	0	0	833	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0400	1.0000	1.0000	1.0400	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	9	0	2	3	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	415	9	0	835	3	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	109	2	0	220	1	0
Total Analysis Volume [veh/h]	437	9	0	879	3	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.23	0.00	17.10	10.97
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.76	0.76
d_A, Approach Delay [s/veh]	0.00		0.00		17.10	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 5: Sierra Ave / South Dwy

Control Type:	Two-way stop	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Base Volume Input [veh/h]	414	0	0	833	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	127	0	0	83	0	0
Site-Generated Trips [veh/h]	10	26	0	5	8	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	568	26	0	954	8	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	149	7	0	251	2	0
Total Analysis Volume [veh/h]	598	27	0	1004	8	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	8.76	0.00	20.22	12.79
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.53	2.53
d_A, Approach Delay [s/veh]	0.00		0.00		20.22	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Casa Grande Dr / West Dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	72	70	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	148	73	0
Site-Generated Trips [veh/h]	0	6	0	25	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	0	248	152	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	0	65	40	0
Total Analysis Volume [veh/h]	0	6	0	261	160	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.10	0.00	0.00	0.00	0.00
Movement LOS		A		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.51	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.10		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Casa Grande Dr / East Dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	East Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	East Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	72	70	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000
In-Process Volume [veh/h]	0	0	0	148	73	0
Site-Generated Trips [veh/h]	0	2	24	1	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	24	224	150	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	6	59	39	0
Total Analysis Volume [veh/h]	0	2	25	236	158	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.44	9.07	7.58	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.05	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.17	0.17	1.34	1.34	0.00	0.00
d_A, Approach Delay [s/veh]	9.07		0.73		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.49					
Intersection LOS	A					

Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_PM.vistro
Report File: K:\...\4 OY CUM WP PM.pdf

Scenario 4 OY CUM WP PM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.621	10.6	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.511	17.6	B
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.504	15.7	B
4	Sierra Ave / North Dwy	Two-way stop	HCM 6th Edition	WB Left	0.028	16.4	C
5	Sierra Ave / South Dwy	Two-way stop	HCM 6th Edition	WB Left	0.113	20.8	C
6	Casa Grande Dr / West Dwy	Two-way stop	HCM 6th Edition	SB Right	0.022	9.0	A
7	Casa Grande Dr / East Dwy	Two-way stop	HCM 6th Edition	SB Right	0.006	8.9	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.621

Intersection Setup

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Base Volume Input [veh/h]	0	717	40	26	461	0	0	0	0	31	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	66	76	75	4	104	33	21	21	42	20	33	9
Site-Generated Trips [veh/h]	0	13	8	5	33	0	0	0	0	22	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	835	125	36	616	33	21	21	42	74	33	34
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	227	34	10	167	8	5	5	11	20	8	9
Total Analysis Volume [veh/h]	66	908	136	39	670	33	21	21	42	80	33	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.09	0.56	0.07	0.37	0.02	0.04	0.06	0.04
s, saturation flow rate [veh/h]	744	1857	549	1884	1352	1700	1360	1738
c, Capacity [veh/h]	557	1465	352	1487	165	208	170	212
d1, Uniform Delay [s]	6.36	4.58	12.32	3.20	40.12	36.01	41.69	36.13
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	2.98	0.64	1.08	1.58	3.73	9.06	4.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.71	0.11	0.47	0.13	0.30	0.47	0.33
d, Delay for Lane Group [s/veh]	6.80	7.56	12.96	4.28	41.70	39.73	50.75	40.24
Lane Group LOS	A	A	B	A	D	D	D	D
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.51	6.92	0.47	3.13	0.51	1.46	2.17	1.63
50th-Percentile Queue Length [ft/ln]	12.71	172.95	11.76	78.26	12.76	36.55	54.17	40.82
95th-Percentile Queue Length [veh/ln]	0.91	11.23	0.85	5.63	0.92	2.63	3.90	2.94
95th-Percentile Queue Length [ft/ln]	22.87	280.79	21.17	140.87	22.97	65.79	97.51	73.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	6.80	7.56	7.56	12.96	4.28	4.28	41.70	39.73	39.73	50.75	40.24	40.24
Movement LOS	A	A	A	B	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.51			4.74			40.22			45.84		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.60											
Intersection LOS	B											
Intersection V/C	0.621											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.106	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	3.391	2.784	1.698	1.807
Bicycle LOS	C	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	1188	548	0	1141	308	0	0	0	388	0	468
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0400	1.0000	1.0000	1.0400	1.0000	1.0000	1.0000	1.0000	1.0400	1.0000	1.0400
In-Process Volume [veh/h]	0	209	0	0	152	102	0	0	0	0	0	139
Site-Generated Trips [veh/h]	0	13	0	0	33	18	0	0	0	0	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1458	548	0	1372	428	0	0	0	404	0	632
Peak Hour Factor	1.0000	0.9700	0.9700	1.0000	0.9700	0.9700	1.0000	1.0000	1.0000	0.9700	1.0000	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	376	141	0	354	110	0	0	0	104	0	163
Total Analysis Volume [veh/h]	0	1503	565	0	1414	441	0	0	0	416	0	652
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	0	51	0	0	0	0	39	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47		35	35	35
g / C, Green / Cycle	0.52	0.52		0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.29	0.27		0.20	0.22	0.22
s, saturation flow rate [veh/h]	5176	5176		1810	1645	1615
c, Capacity [veh/h]	2703	2703		704	640	628
d1, Uniform Delay [s]	14.48	14.13		20.92	21.45	21.56
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.83	0.73		2.59	3.47	3.68
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.52		0.51	0.56	0.57
d, Delay for Lane Group [s/veh]	15.31	14.86		23.51	24.92	25.24
Lane Group LOS	B	B		C	C	C
Critical Lane Group	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.60	6.06		6.00	6.25	6.30
50th-Percentile Queue Length [ft/ln]	165.12	151.45		149.97	156.19	157.55
95th-Percentile Queue Length [veh/ln]	10.82	10.09		10.02	10.35	10.42
95th-Percentile Queue Length [ft/ln]	270.49	252.36		250.39	258.67	260.47

Movement, Approach, & Intersection Results

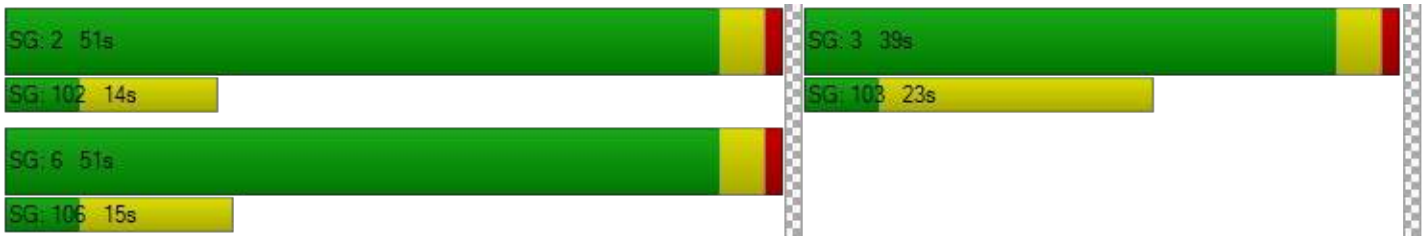
d_M, Delay for Movement [s/veh]	0.00	15.31	0.00	0.00	14.86	0.00	0.00	0.00	0.00	23.71	0.00	25.09
Movement LOS		B			B					C		C
d_A, Approach Delay [s/veh]	15.31			14.86			0.00			24.56		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	17.63											
Intersection LOS	B											
Intersection V/C	0.511											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.060	3.093	1.425	2.393
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1044	1044	0	0
d_b, Bicycle Delay [s]	10.27	10.27	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.386	2.337	4.132	5.895
Bicycle LOS	B	B	D	F

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1433	640	0	1151	399	214	0	476	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0400	1.0000	1.0000	1.0400	1.0000	1.0400	1.0000	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	66	0	0	42	110	143	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	17	16	6	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1563	640	0	1256	525	372	0	495	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	411	168	0	331	138	98	0	130	0	0	0
Total Analysis Volume [veh/h]	0	1645	674	0	1322	553	392	0	521	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	56	0	0	56	0	34	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	52	52	30	30	30	
g / C, Green / Cycle	0.58	0.58	0.33	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.26	0.17	0.18	0.19	
s, saturation flow rate [veh/h]	5176	5176	1810	1664	1615	
c, Capacity [veh/h]	2990	2990	603	555	538	
d1, Uniform Delay [s]	11.76	10.77	24.12	24.45	24.58	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.73	0.48	3.10	3.84	4.14	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.55	0.44	0.51	0.55	0.56	
d, Delay for Lane Group [s/veh]	12.49	11.25	27.22	28.29	28.72	
Lane Group LOS	B	B	C	C	C	
Critical Lane Group	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.37	4.67	5.66	5.70	5.71	
50th-Percentile Queue Length [ft/ln]	159.24	116.80	141.55	142.41	142.78	
95th-Percentile Queue Length [veh/ln]	10.51	8.22	9.56	9.61	9.63	
95th-Percentile Queue Length [ft/ln]	262.71	205.42	239.11	240.27	240.77	

Movement, Approach, & Intersection Results

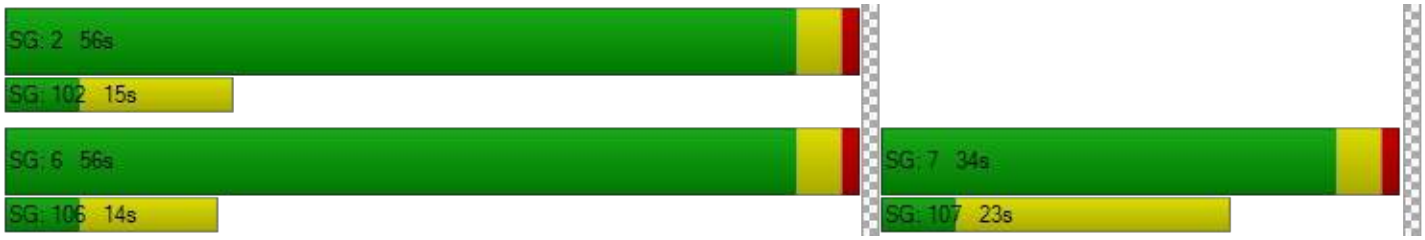
d_M, Delay for Movement [s/veh]	0.00	12.49	0.00	0.00	11.25	0.00	27.46	0.00	28.54	0.00	0.00	0.00
Movement LOS		B			B		C		C			
d_A, Approach Delay [s/veh]	12.49			11.25			28.07			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	15.73											
Intersection LOS	B											
Intersection V/C	0.504											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.081	3.063	2.355	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1156	1156	0	0
d_b, Bicycle Delay [s]	8.02	8.02	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.464	2.287	5.639	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave / North Dwy

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.028

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Base Volume Input [veh/h]	717	0	0	461	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0400	1.0000	1.0000	1.0400	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	3	0	1	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	720	3	0	462	9	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	189	1	0	122	2	0
Total Analysis Volume [veh/h]	758	3	0	486	9	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	9.23	0.00	16.35	14.18
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	2.12	2.12
d_A, Approach Delay [s/veh]	0.00		0.00		16.35	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 5: Sierra Ave / South Dwy

Control Type:	Two-way stop	Delay (sec / veh):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.113

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Base Volume Input [veh/h]	717	0	0	461	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	106	0	0	141	0	0
Site-Generated Trips [veh/h]	6	11	0	10	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	858	11	0	630	28	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	226	3	0	166	7	0
Total Analysis Volume [veh/h]	903	12	0	663	29	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.11	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	9.83	0.00	20.78	17.58
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.38	0.38
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	9.41	9.41
d_A, Approach Delay [s/veh]	0.00		0.00		20.78	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.37					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Casa Grande Dr / West Dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	66	51	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	100	62	0
Site-Generated Trips [veh/h]	0	19	0	13	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	19	0	182	122	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	5	0	48	32	0
Total Analysis Volume [veh/h]	0	20	0	192	128	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	8.99	0.00	0.00	0.00	0.00
Movement LOS		A		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.66	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.99		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.53					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Casa Grande Dr / East Dwy

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name			Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name			Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	66	51	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0000
In-Process Volume [veh/h]	0	0	0	100	62	0
Site-Generated Trips [veh/h]	0	6	9	4	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	9	173	116	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	2	46	31	0
Total Analysis Volume [veh/h]	0	6	9	182	122	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.42	8.90	7.47	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.49	0.49	0.46	0.46	0.00	0.00
d_A, Approach Delay [s/veh]	8.90		0.35		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.38					
Intersection LOS	A					

Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_AM.vistro
Report File: K:\...\5 HY AM.pdf

Scenario 5 HY AM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.622	12.1	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.333	9.0	A
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.462	13.6	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

Intersection Setup

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Base Volume Input [veh/h]	30	656	138	67	956	15	30	30	60	81	15	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	656	138	67	956	15	30	30	60	81	15	72
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	178	38	18	260	4	8	8	15	22	4	20
Total Analysis Volume [veh/h]	30	713	150	73	1039	15	30	30	60	88	15	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.47	0.11	0.56	0.02	0.05	0.07	0.06
s, saturation flow rate [veh/h]	535	1843	651	1895	1324	1700	1327	1655
c, Capacity [veh/h]	349	1454	458	1495	143	208	148	202
d1, Uniform Delay [s]	11.82	3.77	8.90	4.52	41.75	36.61	43.24	36.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	1.79	0.74	2.82	3.30	6.46	16.50	7.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.59	0.16	0.70	0.21	0.43	0.60	0.46
d, Delay for Lane Group [s/veh]	12.30	5.56	9.65	7.34	45.05	43.07	59.74	44.09
Lane Group LOS	B	A	A	A	D	D	E	D
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.35	4.61	0.72	6.85	0.77	2.18	2.62	2.29
50th-Percentile Queue Length [ft/ln]	8.77	115.16	17.98	171.34	19.34	54.60	65.57	57.28
95th-Percentile Queue Length [veh/ln]	0.63	8.13	1.29	11.15	1.39	3.93	4.72	4.12
95th-Percentile Queue Length [ft/ln]	15.79	203.16	32.36	278.67	34.81	98.28	118.03	103.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.30	5.56	5.56	9.65	7.34	7.34	45.05	43.07	43.07	59.74	44.09	44.09
Movement LOS	B	A	A	A	A	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	5.79			7.48			43.56			51.70		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	12.14											
Intersection LOS	B											
Intersection V/C	0.622											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.043	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	3.033	3.419	1.758	1.858
Bicycle LOS	C	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.333

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	884	391	0	1330	380	0	0	0	31	0	171
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	884	391	0	1330	380	0	0	0	31	0	171
Peak Hour Factor	1.0000	0.9300	0.9700	1.0000	0.9300	0.9700	1.0000	1.0000	1.0000	0.9300	1.0000	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	238	101	0	358	98	0	0	0	8	0	46
Total Analysis Volume [veh/h]	0	951	403	0	1430	392	0	0	0	33	0	184
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	63	0	0	63	0	0	0	0	27	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59		23	23	23
g / C, Green / Cycle	0.66	0.66		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.18	0.28		0.02	0.06	0.06
s, saturation flow rate [veh/h]	5176	5176		1810	1615	1615
c, Capacity [veh/h]	3393	3393		462	413	413
d1, Uniform Delay [s]	6.54	7.38		25.40	26.45	26.45
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.39		0.30	1.25	1.25
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.42		0.07	0.22	0.22
d, Delay for Lane Group [s/veh]	6.75	7.76		25.70	27.69	27.69
Lane Group LOS	A	A		C	C	C
Critical Lane Group	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.29	3.89		0.57	1.68	1.68
50th-Percentile Queue Length [ft/ln]	57.22	97.33		14.18	41.93	41.93
95th-Percentile Queue Length [veh/ln]	4.12	7.01		1.02	3.02	3.02
95th-Percentile Queue Length [ft/ln]	103.00	175.20		25.52	75.47	75.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.75	0.00	0.00	7.76	0.00	0.00	0.00	0.00	25.70	0.00	27.69
Movement LOS		A			A					C		C
d_A, Approach Delay [s/veh]	6.75			7.76			0.00			27.39		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	9.03											
Intersection LOS	A											
Intersection V/C	0.333											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.932	2.953	1.425	2.185
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1311	1311	0	0
d_b, Bicycle Delay [s]	5.34	5.34	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.083	2.346	4.132	4.490
Bicycle LOS	B	B	D	E

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1125	451	0	1573	472	240	0	449	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1125	451	0	1573	472	240	0	449	0	0	0
Peak Hour Factor	1.0000	0.9600	0.9500	1.0000	0.9600	0.9500	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	293	119	0	410	124	63	0	117	0	0	0
Total Analysis Volume [veh/h]	0	1172	475	0	1639	497	250	0	468	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	30	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	26	26	26	
g / C, Green / Cycle	0.62	0.62	0.29	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.23	0.32	0.14	0.14	0.14	
s, saturation flow rate [veh/h]	5176	5176	1810	1615	1615	
c, Capacity [veh/h]	3220	3220	523	467	467	
d1, Uniform Delay [s]	8.30	9.40	26.40	26.61	26.61	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.32	0.58	3.11	3.82	3.82	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.36	0.51	0.48	0.50	0.50	
d, Delay for Lane Group [s/veh]	8.62	9.98	29.52	30.43	30.43	
Lane Group LOS	A	A	C	C	C	
Critical Lane Group	No	Yes	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	3.41	5.42	4.77	4.57	4.57	
50th-Percentile Queue Length [ft/ln]	85.21	135.43	119.31	114.26	114.26	
95th-Percentile Queue Length [veh/ln]	6.14	9.23	8.36	8.08	8.08	
95th-Percentile Queue Length [ft/ln]	153.38	230.86	208.88	201.91	201.91	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	8.62	0.00	0.00	9.98	0.00	29.55	0.00	30.43	0.00	0.00	0.00
Movement LOS		A			A		C		C			
d_A, Approach Delay [s/veh]	8.62			9.98			30.11			0.00		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	13.62											
Intersection LOS	B											
Intersection V/C	0.462											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.052	3.022	2.308	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1244	1244	0	0
d_b, Bicycle Delay [s]	6.42	6.42	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.204	2.461	5.317	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_PM.vistro
Report File: K:\...\5 HY PM.pdf

Scenario 5 HY PM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.610	10.5	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.507	17.6	B
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.501	15.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

Intersection Setup

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Base Volume Input [veh/h]	66	844	117	68	725	33	21	21	42	61	33	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	844	117	68	725	33	21	21	42	61	33	42
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	229	32	18	197	8	5	5	11	17	8	11
Total Analysis Volume [veh/h]	66	917	127	74	788	33	21	21	42	66	33	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.10	0.56	0.13	0.44	0.02	0.04	0.05	0.05
s, saturation flow rate [veh/h]	666	1860	549	1887	1341	1700	1360	1723
c, Capacity [veh/h]	482	1467	353	1488	158	208	170	211
d1, Uniform Delay [s]	7.83	4.57	13.18	3.55	40.58	36.01	41.24	36.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	2.96	1.35	1.48	1.75	3.73	6.56	5.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.71	0.21	0.55	0.13	0.30	0.39	0.38
d, Delay for Lane Group [s/veh]	8.42	7.53	14.53	5.03	42.33	39.73	47.79	41.38
Lane Group LOS	A	A	B	A	D	D	D	D
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.59	6.90	0.96	4.09	0.52	1.46	1.73	1.87
50th-Percentile Queue Length [ft/ln]	14.83	172.53	24.05	102.25	12.94	36.55	43.22	46.83
95th-Percentile Queue Length [veh/ln]	1.07	11.21	1.73	7.36	0.93	2.63	3.11	3.37
95th-Percentile Queue Length [ft/ln]	26.69	280.24	43.29	184.04	23.29	65.79	77.80	84.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	8.42	7.53	7.53	14.53	5.03	5.03	42.33	39.73	39.73	47.79	41.38	41.38
Movement LOS	A	A	A	B	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.58			5.81			40.38			44.30		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.49											
Intersection LOS	B											
Intersection V/C	0.610											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.106	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	3.391	3.036	1.698	1.799
Bicycle LOS	C	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.507

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	1445	570	0	1391	422	0	0	0	404	0	626
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1445	570	0	1391	422	0	0	0	404	0	626
Peak Hour Factor	1.0000	0.9700	0.9700	1.0000	0.9700	0.9700	1.0000	1.0000	1.0000	0.9700	1.0000	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	372	147	0	359	109	0	0	0	104	0	161
Total Analysis Volume [veh/h]	0	1490	588	0	1434	435	0	0	0	416	0	645
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	0	51	0	0	0	0	39	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47		35	35	35
g / C, Green / Cycle	0.52	0.52		0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.29	0.28		0.20	0.21	0.22
s, saturation flow rate [veh/h]	5176	5176		1810	1646	1615
c, Capacity [veh/h]	2703	2703		704	640	628
d1, Uniform Delay [s]	14.43	14.21		20.89	21.40	21.52
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	0.75		2.56	3.41	3.63
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.53		0.50	0.55	0.56
d, Delay for Lane Group [s/veh]	15.24	14.96		23.44	24.82	25.14
Lane Group LOS	B	B		C	C	C
Critical Lane Group	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.52	6.18		5.95	6.19	6.24
50th-Percentile Queue Length [ft/ln]	163.08	154.46		148.69	154.74	156.12
95th-Percentile Queue Length [veh/ln]	10.71	10.25		9.95	10.27	10.34
95th-Percentile Queue Length [ft/ln]	267.79	256.37		248.68	256.74	258.58

Movement, Approach, & Intersection Results

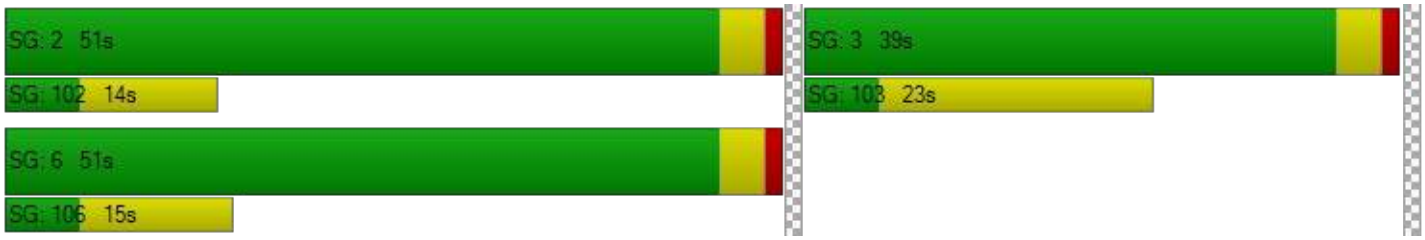
d_M, Delay for Movement [s/veh]	0.00	15.24	0.00	0.00	14.96	0.00	0.00	0.00	0.00	23.65	0.00	25.00
Movement LOS		B			B					C		C
d_A, Approach Delay [s/veh]	15.24			14.96			0.00			24.47		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	17.60											
Intersection LOS	B											
Intersection V/C	0.507											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.061	3.093	1.425	2.391
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1044	1044	0	0
d_b, Bicycle Delay [s]	10.27	10.27	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.379	2.348	4.132	5.883
Bicycle LOS	B	B	D	F

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1556	666	0	1529	525	366	0	495	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1556	666	0	1529	525	366	0	495	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	409	175	0	402	138	96	0	130	0	0	0
Total Analysis Volume [veh/h]	0	1638	701	0	1609	553	385	0	521	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	56	0	0	56	0	34	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	52	52	30	30	30	
g / C, Green / Cycle	0.58	0.58	0.33	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.31	0.17	0.18	0.18	
s, saturation flow rate [veh/h]	5176	5176	1810	1661	1615	
c, Capacity [veh/h]	2990	2990	603	554	538	
d1, Uniform Delay [s]	11.74	11.64	24.10	24.42	24.53	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.73	0.70	3.06	3.79	4.06	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.55	0.54	0.51	0.54	0.55	
d, Delay for Lane Group [s/veh]	12.46	12.34	27.16	28.20	28.59	
Lane Group LOS	B	B	C	C	C	
Critical Lane Group	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.33	6.16	5.62	5.64	5.64	
50th-Percentile Queue Length [ft/ln]	158.23	154.10	140.50	140.93	141.12	
95th-Percentile Queue Length [veh/ln]	10.46	10.24	9.51	9.53	9.54	
95th-Percentile Queue Length [ft/ln]	261.38	255.89	237.70	238.27	238.53	

Movement, Approach, & Intersection Results

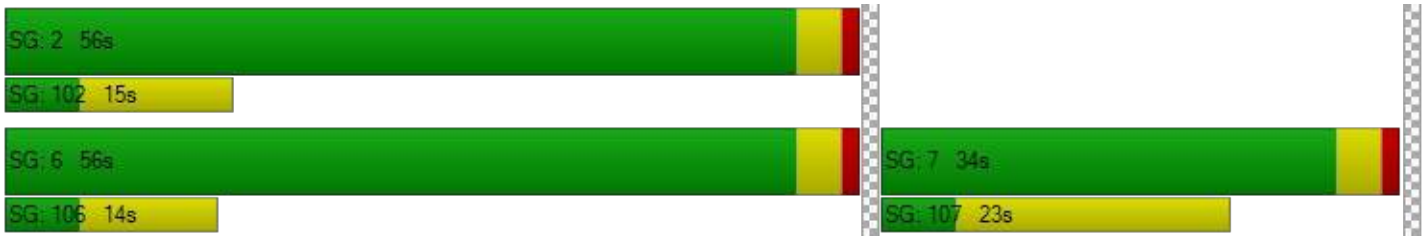
d_M, Delay for Movement [s/veh]	0.00	12.46	0.00	0.00	12.34	0.00	27.38	0.00	28.43	0.00	0.00	0.00
Movement LOS		B			B		C		C			
d_A, Approach Delay [s/veh]	12.46			12.34			27.98			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	15.80											
Intersection LOS	B											
Intersection V/C	0.501											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.120	3.101	2.353	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1156	1156	0	0
d_b, Bicycle Delay [s]	8.02	8.02	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.461	2.445	5.627	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_AM.vistro
Report File: K:\...\6 HY WP AM.pdf

Scenario 6 HY WP AM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.634	12.7	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.340	9.2	A
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.465	13.8	B
4	Sierra Ave / North Dwy	Two-way stop	HCM 6th Edition	WB Right	0.013	10.9	B
5	Sierra Ave / South Dwy	Two-way stop	HCM 6th Edition	WB Right	0.008	14.7	B
6	Casa Grande Dr / West Dwy	Two-way stop	HCM 6th Edition	SB Right	0.007	9.2	A
7	Casa Grande Dr / East Dwy	Two-way stop	HCM 6th Edition	SB Right	0.002	9.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.634

Intersection Setup

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Base Volume Input [veh/h]	30	656	138	67	956	15	30	30	60	81	15	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	22	3	9	0	0	0	0	7	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	687	160	70	965	15	30	30	60	88	15	77
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	187	43	19	262	4	8	8	15	24	4	21
Total Analysis Volume [veh/h]	30	747	174	76	1049	15	30	30	60	96	15	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.06	0.50	0.12	0.56	0.02	0.05	0.07	0.06
s, saturation flow rate [veh/h]	530	1839	616	1895	1317	1700	1327	1653
c, Capacity [veh/h]	343	1451	422	1495	138	208	148	202
d1, Uniform Delay [s]	12.09	4.02	10.17	4.57	42.08	36.61	43.39	36.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	2.13	0.93	2.91	3.59	6.46	20.11	8.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.63	0.18	0.71	0.22	0.43	0.65	0.49
d, Delay for Lane Group [s/veh]	12.60	6.15	11.11	7.48	45.67	43.07	63.50	45.15
Lane Group LOS	B	A	B	A	D	D	E	D
Critical Lane Group	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.36	5.28	0.82	7.01	0.78	2.18	2.95	2.47
50th-Percentile Queue Length [ft/ln]	8.91	131.89	20.61	175.33	19.56	54.60	73.69	61.78
95th-Percentile Queue Length [veh/ln]	0.64	9.04	1.48	11.36	1.41	3.93	5.31	4.45
95th-Percentile Queue Length [ft/ln]	16.04	226.06	37.10	283.91	35.22	98.28	132.65	111.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.60	6.15	6.15	11.11	7.48	7.48	45.67	43.07	43.07	63.50	45.15	45.15
Movement LOS	B	A	A	B	A	A	D	D	D	E	D	D
d_A, Approach Delay [s/veh]	6.35			7.72			43.72			54.18		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	12.74											
Intersection LOS	B											
Intersection V/C	0.634											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.043	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	3.129	3.441	1.758	1.881
Bicycle LOS	C	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.340

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	884	391	0	1330	380	0	0	0	31	0	171
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	34	0	0	10	5	0	0	0	0	0	15
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	918	391	0	1340	385	0	0	0	31	0	186
Peak Hour Factor	1.0000	0.9300	0.9700	1.0000	0.9300	0.9700	1.0000	1.0000	1.0000	0.9300	1.0000	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	247	101	0	360	99	0	0	0	8	0	50
Total Analysis Volume [veh/h]	0	987	403	0	1441	397	0	0	0	33	0	200
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	63	0	0	63	0	0	0	0	27	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	59	59		23	23	23
g / C, Green / Cycle	0.66	0.66		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.19	0.28		0.02	0.06	0.06
s, saturation flow rate [veh/h]	5176	5176		1810	1615	1615
c, Capacity [veh/h]	3393	3393		462	413	413
d1, Uniform Delay [s]	6.60	7.40		25.40	26.59	26.59
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.39		0.30	1.39	1.39
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.42		0.07	0.24	0.24
d, Delay for Lane Group [s/veh]	6.81	7.79		25.70	27.97	27.97
Lane Group LOS	A	A		C	C	C
Critical Lane Group	No	Yes		No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.40	3.94		0.57	1.84	1.84
50th-Percentile Queue Length [ft/ln]	59.91	98.38		14.18	45.89	45.89
95th-Percentile Queue Length [veh/ln]	4.31	7.08		1.02	3.30	3.30
95th-Percentile Queue Length [ft/ln]	107.84	177.08		25.52	82.61	82.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	6.81	0.00	0.00	7.79	0.00	0.00	0.00	0.00	25.70	0.00	27.97
Movement LOS		A			A					C		C
d_A, Approach Delay [s/veh]	6.81			7.79			0.00			27.65		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	9.17											
Intersection LOS	A											
Intersection V/C	0.340											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.938	2.961	1.425	2.189
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1311	1311	0	0
d_b, Bicycle Delay [s]	5.34	5.34	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.102	2.352	4.132	4.517
Bicycle LOS	B	B	D	E

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1125	451	0	1573	472	240	0	449	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	0	0	3	7	17	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1142	451	0	1576	479	257	0	449	0	0	0
Peak Hour Factor	1.0000	0.9600	0.9500	1.0000	0.9600	0.9500	0.9600	1.0000	0.9600	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	297	119	0	410	126	67	0	117	0	0	0
Total Analysis Volume [veh/h]	0	1190	475	0	1642	504	268	0	468	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	60	0	0	60	0	30	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	56	56	26	26	26	
g / C, Green / Cycle	0.62	0.62	0.29	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.23	0.32	0.14	0.15	0.15	
s, saturation flow rate [veh/h]	5176	5176	1810	1621	1615	
c, Capacity [veh/h]	3220	3220	523	468	467	
d1, Uniform Delay [s]	8.34	9.41	26.56	26.68	26.69	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.33	0.58	3.34	3.92	3.95	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.37	0.51	0.50	0.51	0.51	
d, Delay for Lane Group [s/veh]	8.67	9.99	29.90	30.61	30.63	
Lane Group LOS	A	A	C	C	C	
Critical Lane Group	No	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	3.48	5.43	4.99	4.68	4.67	
50th-Percentile Queue Length [ft/ln]	86.92	135.80	124.85	116.97	116.70	
95th-Percentile Queue Length [veh/ln]	6.26	9.25	8.66	8.23	8.21	
95th-Percentile Queue Length [ft/ln]	156.45	231.36	216.48	205.66	205.28	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	8.67	0.00	0.00	9.99	0.00	29.96	0.00	30.62	0.00	0.00	0.00
Movement LOS		A			A		C		C			
d_A, Approach Delay [s/veh]	8.67			9.99			30.37			0.00		
Approach LOS	A			A			C			A		
d_I, Intersection Delay [s/veh]	13.75											
Intersection LOS	B											
Intersection V/C	0.465											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.055	3.027	2.312	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1244	1244	0	0
d_b, Bicycle Delay [s]	6.42	6.42	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.214	2.463	5.347	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave / North Dwy

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Base Volume Input [veh/h]	414	0	0	833	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	4	9	0	12	0	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	418	9	0	845	0	8
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	110	2	0	222	0	2
Total Analysis Volume [veh/h]	440	9	0	889	0	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	10.95
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.04
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.99
d_A, Approach Delay [s/veh]	0.00		0.00		10.95	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Sierra Ave / South Dwy

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Base Volume Input [veh/h]	758	0	0	1038	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	26	0	12	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	768	26	0	1050	0	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	7	0	276	0	1
Total Analysis Volume [veh/h]	808	27	0	1105	0	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.70
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.61
d_A, Approach Delay [s/veh]	0.00		0.00		14.70	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Casa Grande Dr / West Dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	235	168	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	0	25	6	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	0	260	174	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	0	68	46	0
Total Analysis Volume [veh/h]	0	6	0	274	183	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.22	0.00	0.00	0.00	0.00
Movement LOS		A		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.53	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.22		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Casa Grande Dr / East Dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	East Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	East Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	235	168	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	24	1	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	2	24	236	172	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	6	62	45	0
Total Analysis Volume [veh/h]	0	2	25	248	181	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.75	9.19	7.63	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.05	0.05	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.17	0.17	1.37	1.37	0.00	0.00
d_A, Approach Delay [s/veh]	9.19		0.70		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	A					

Sierra and Casa Grande Warehouse

Vistro File: K:\...\Casa Grande_TBB_PM.vistro
Report File: K:\...\6 HY WP PM.pdf

Scenario 6 HY WP PM
5/5/2020

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Sierra Avenue at Casa Grande Drive	Signalized	HCM 6th Edition	WB Left	0.641	11.4	B
2	Sierra Avenue at SR-210 WB Ramp	Signalized	HCM 6th Edition	WB Right	0.511	17.7	B
3	Sierra Avenue at SR-210 EB Ramp	Signalized	HCM 6th Edition	EB Right	0.504	15.9	B
4	Sierra Ave / North Dwy	Two-way stop	HCM 6th Edition	WB Right	0.072	14.7	B
5	Sierra Ave / South Dwy	Two-way stop	HCM 6th Edition	WB Right	0.029	17.0	C
6	Casa Grande Dr / West Dwy	Two-way stop	HCM 6th Edition	SB Right	0.022	9.1	A
7	Casa Grande Dr / East Dwy	Two-way stop	HCM 6th Edition	SB Right	0.007	9.0	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Sierra Avenue at Casa Grande Drive

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

Intersection Setup

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Sierra Avenue			Sierra Avenue						Casa Grande Drive		
Base Volume Input [veh/h]	66	844	117	68	725	33	21	21	42	61	33	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	8	5	33	0	0	0	0	22	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	857	125	73	758	33	21	21	42	83	33	46
Peak Hour Factor	1.0000	0.9200	0.9200	0.9200	0.9200	1.0000	1.0000	1.0000	1.0000	0.9200	1.0000	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	233	34	20	206	8	5	5	11	23	8	13
Total Analysis Volume [veh/h]	66	932	136	79	824	33	21	21	42	90	33	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	75	0	0	75	0	0	15	0	0	15	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	9	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.10	0.57	0.15	0.45	0.02	0.04	0.07	0.05
s, saturation flow rate [veh/h]	644	1858	537	1887	1336	1700	1360	1717
c, Capacity [veh/h]	461	1466	338	1489	154	208	170	210
d1, Uniform Delay [s]	8.39	4.72	14.19	3.67	40.79	36.01	42.02	36.43
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	3.21	1.61	1.63	1.84	3.73	11.29	5.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.73	0.23	0.58	0.14	0.30	0.53	0.40
d, Delay for Lane Group [s/veh]	9.04	7.93	15.81	5.30	42.63	39.73	53.31	41.93
Lane Group LOS	A	A	B	A	D	D	D	D
Critical Lane Group	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.62	7.32	1.09	4.43	0.52	1.46	2.51	1.98
50th-Percentile Queue Length [ft/ln]	15.58	182.97	27.14	110.76	13.02	36.55	62.64	49.57
95th-Percentile Queue Length [veh/ln]	1.12	11.76	1.95	7.88	0.94	2.63	4.51	3.57
95th-Percentile Queue Length [ft/ln]	28.04	293.89	48.85	197.06	23.44	65.79	112.74	89.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.04	7.93	7.93	15.81	5.30	5.30	42.63	39.73	39.73	53.31	41.93	41.93
Movement LOS	A	A	A	B	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.99			6.19			40.46			47.85		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	11.40											
Intersection LOS	B											
Intersection V/C	0.641											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	9.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.106	0.000
Crosswalk LOS	F	F	B	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1578	1578	244	244
d_b, Bicycle Delay [s]	2.01	2.01	34.67	34.67
l_b,int, Bicycle LOS Score for Intersection	3.431	3.104	1.698	1.845
Bicycle LOS	C	C	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Sierra Avenue at SR-210 WB Ramp

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name	Sierra Avenue			Sierra Avenue								
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue								
Base Volume Input [veh/h]	0	1445	570	0	1391	422	0	0	0	404	0	626
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	2.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	13	0	0	38	14	0	0	0	0	0	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1458	570	0	1429	436	0	0	0	404	0	632
Peak Hour Factor	1.0000	0.9700	0.9700	1.0000	0.9700	0.9700	1.0000	1.0000	1.0000	0.9700	1.0000	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	376	147	0	368	112	0	0	0	104	0	163
Total Analysis Volume [veh/h]	0	1503	588	0	1473	449	0	0	0	416	0	652
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	0	0	0	3	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	0	0	0	5	0	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	30	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Split [s]	0	51	0	0	51	0	0	0	0	39	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	5	0	0
Pedestrian Clearance [s]	0	9	0	0	10	0	0	0	0	18	0	0
Rest In Walk		No			No					No		
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Minimum Recall		No			No					No		
Maximum Recall		No			No					No		
Pedestrian Recall		No			No					No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C		L	C	R
C, Cycle Length [s]	90	90		90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	47	47		35	35	35
g / C, Green / Cycle	0.52	0.52		0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.29	0.28		0.20	0.22	0.22
s, saturation flow rate [veh/h]	5176	5176		1810	1645	1615
c, Capacity [veh/h]	2703	2703		704	640	628
d1, Uniform Delay [s]	14.48	14.36		20.92	21.45	21.56
k, delay calibration	0.50	0.50		0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.83	0.79		2.59	3.47	3.68
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.54		0.51	0.56	0.57
d, Delay for Lane Group [s/veh]	15.31	15.15		23.51	24.92	25.24
Lane Group LOS	B	B		C	C	C
Critical Lane Group	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.60	6.42		6.00	6.25	6.30
50th-Percentile Queue Length [ft/ln]	165.12	160.43		149.97	156.19	157.55
95th-Percentile Queue Length [veh/ln]	10.82	10.57		10.02	10.35	10.42
95th-Percentile Queue Length [ft/ln]	270.49	264.29		250.39	258.67	260.47

Movement, Approach, & Intersection Results

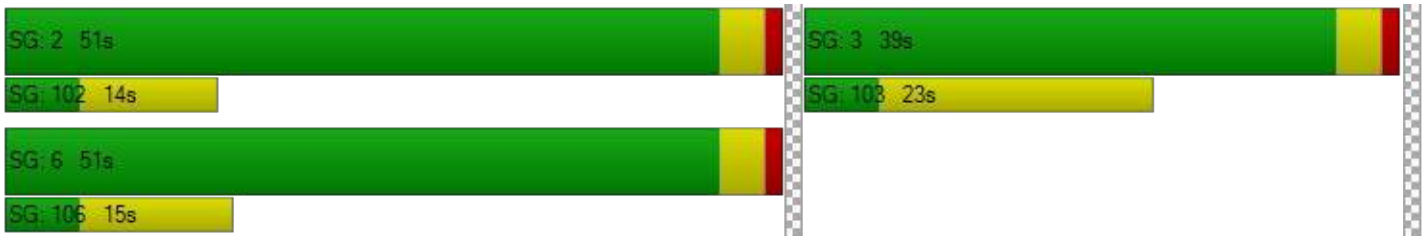
d_M, Delay for Movement [s/veh]	0.00	15.31	0.00	0.00	15.15	0.00	0.00	0.00	0.00	23.71	0.00	25.09
Movement LOS		B			B					C		C
d_A, Approach Delay [s/veh]	15.31			15.15			0.00			24.56		
Approach LOS	B			B			A			C		
d_I, Intersection Delay [s/veh]	17.69											
Intersection LOS	B											
Intersection V/C	0.511											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.068	3.101	1.425	2.393
Crosswalk LOS	C	C	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1044	1044	0	0
d_b, Bicycle Delay [s]	10.27	10.27	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.386	2.370	4.132	5.895
Bicycle LOS	B	B	D	F

Sequence

Ring 1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Sierra Avenue at SR-210 EB Ramp

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Sierra Avenue			Sierra Avenue			SR-210 EB Ramp					
Base Volume Input [veh/h]	0	1556	666	0	1529	525	366	0	495	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	7	0	0	17	21	6	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1563	666	0	1546	546	372	0	495	0	0	0
Peak Hour Factor	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	411	175	0	407	144	98	0	130	0	0	0
Total Analysis Volume [veh/h]	0	1645	701	0	1627	575	392	0	521	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Unsigna	Permiss	Permiss	Unsigna	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	2	0	0	6	0	7	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	5	0	0	5	0	5	0	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	0	56	0	0	56	0	34	0	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	9	0	18	0	0	0	0	0
Rest In Walk		No			No		No					
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No		No					
Maximum Recall		No			No		No					
Pedestrian Recall		No			No		No					
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	
C, Cycle Length [s]	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	52	52	30	30	30	
g / C, Green / Cycle	0.58	0.58	0.33	0.33	0.33	
(v / s)_i Volume / Saturation Flow Rate	0.32	0.31	0.17	0.18	0.19	
s, saturation flow rate [veh/h]	5176	5176	1810	1664	1615	
c, Capacity [veh/h]	2990	2990	603	555	538	
d1, Uniform Delay [s]	11.76	11.70	24.12	24.45	24.58	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.73	0.72	3.10	3.84	4.14	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.55	0.54	0.51	0.55	0.56	
d, Delay for Lane Group [s/veh]	12.49	12.42	27.22	28.29	28.72	
Lane Group LOS	B	B	C	C	C	
Critical Lane Group	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	6.37	6.27	5.66	5.70	5.71	
50th-Percentile Queue Length [ft/ln]	159.24	156.65	141.55	142.41	142.78	
95th-Percentile Queue Length [veh/ln]	10.51	10.37	9.56	9.61	9.63	
95th-Percentile Queue Length [ft/ln]	262.71	259.29	239.11	240.27	240.77	

Movement, Approach, & Intersection Results

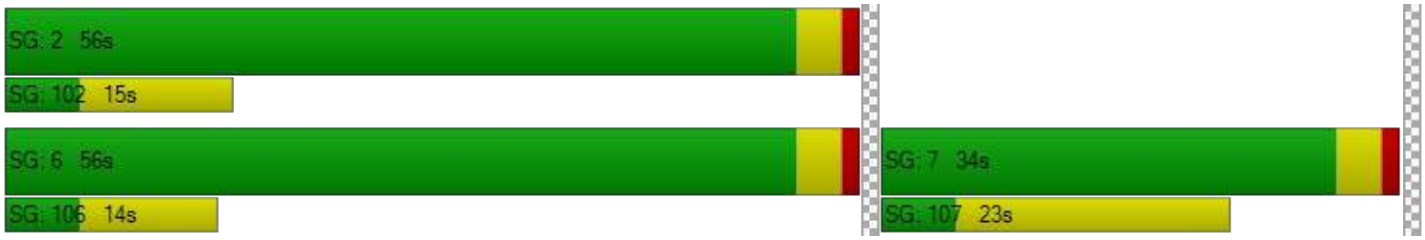
d_M, Delay for Movement [s/veh]	0.00	12.49	0.00	0.00	12.42	0.00	27.46	0.00	28.54	0.00	0.00	0.00
Movement LOS		B			B		C		C			
d_A, Approach Delay [s/veh]	12.49			12.42			28.07			0.00		
Approach LOS	B			B			C			A		
d_I, Intersection Delay [s/veh]	15.86											
Intersection LOS	B											
Intersection V/C	0.504											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	3.124	3.106	2.355	1.425
Crosswalk LOS	C	C	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1156	1156	0	0
d_b, Bicycle Delay [s]	8.02	8.02	45.00	45.00
l_b,int, Bicycle LOS Score for Intersection	2.464	2.454	5.639	4.132
Bicycle LOS	B	B	F	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Sierra Ave / North Dwy

Control Type:	Two-way stop	Delay (sec / veh):	14.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.072

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		North Dwy	
Base Volume Input [veh/h]	717	0	0	461	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	3	0	38	0	28
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	729	3	0	499	0	28
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	192	1	0	131	0	7
Total Analysis Volume [veh/h]	767	3	0	525	0	29
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	14.67
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	5.81
d_A, Approach Delay [s/veh]	0.00		0.00		14.67	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Sierra Ave / South Dwy

Control Type:	Two-way stop	Delay (sec / veh):	17.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.029

Intersection Setup

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Sierra Avenue		Sierra Avenue		South Dwy	
Base Volume Input [veh/h]	907	0	0	826	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	11	0	38	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	913	11	0	864	0	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	240	3	0	227	0	2
Total Analysis Volume [veh/h]	961	12	0	909	0	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	17.02
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	2.25
d_A, Approach Delay [s/veh]	0.00		0.00		17.02	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 6: Casa Grande Dr / West Dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	West Dwy		Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	204	136	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	19	0	13	7	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	19	0	217	143	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	5	0	57	38	0
Total Analysis Volume [veh/h]	0	20	0	228	151	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.02	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.11	0.00	0.00	0.00	0.00
Movement LOS		A		A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	1.71	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.11		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Casa Grande Dr / East Dwy

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name			Casa Grande Drive		Casa Grande Drive	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name			Casa Grande Drive		Casa Grande Drive	
Base Volume Input [veh/h]	0	0	0	204	136	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	6	9	4	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	6	9	208	137	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	2	2	55	36	0
Total Analysis Volume [veh/h]	0	6	9	219	144	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.86	9.01	7.52	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.50	0.50	0.47	0.47	0.00	0.00
d_A, Approach Delay [s/veh]	9.01		0.30		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	A					

APPENDIX **D**

CUMULATIVE PROJECTS INFORMATION

TOTAL CUMULATIVE PROJECTS TRAFFIC

AM Peak Hour

		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Sierra Avenue at Casa Grande Drive	30	94	109	9	59	15	30	30	60	55	15	3
2	Sierra Avenue at SR-210 Westbound Ramp	0	118	0	0	187	125	0	0	0	0	0	79
3	Sierra Avenue at SR-210 Eastbound Ramp	0	30	0	0	60	128	88	0	0	0	0	0

PM Peak Hour

		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Sierra Avenue at Casa Grande Drive	66	76	75	4	104	33	21	21	42	20	33	9
2	Sierra Avenue at SR-210 Westbound Ramp	0	209	0	0	152	102	0	0	0	0	0	139
3	Sierra Avenue at SR-210 Eastbound Ramp	0	66	0	0	42	110	143	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	1	Sierra Avenue at Casa Grande Drive

Mirror distribution? Y Entire Intersection

Mirror distribution?

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		30	0	18	9	59	15	0	0	0	50	15	0
AM Out		0	94	91	0	0	0	30	30	60	5	0	3
AM Tot		30	94	109	9	59	15	30	30	60	55	15	3
PM In		66	0	8	4	104	33	0	0	0	2	33	0
PM Out		0	76	67	0	0	0	21	21	42	18	0	9
PM Tot		66	76	75	4	104	33	21	21	42	20	33	9

Zone #	1	Summit at Rosena

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	10%				15%	5%				15%	5%	
Y	0%	15%	15%	0%	0%	0%	5%	5%	10%	0%	0%	0%
AM Out												
PM In	10%	0%	0%	0%	15%	5%	0%	0%	0%		5%	0%
PM Out	0%	15%	15%	0%	0%	0%	5%	5%	10%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	303	30	0	0	0	45	15	0	0	0	45	15	0
AM Out	598	0	90	90	0	0	0	30	30	60	0	0	0
PM In	656	66	0	0	0	98	33	0	0	0	0	33	0
PM Out	420	0	63	63	0	0	0	21	21	42	0	0	0

Zone #	2	SEC Sierra / Clubhouse Dr - Warehouse

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In			20%	10%	15%					5%		
Y	0%	15%	5%	0%	0%	0%	0%	0%	0%	20%	0%	10%
AM Out												
PM In	0%	0%	20%	10%	15%	0%	0%	0%	0%	5%	0%	0%
PM Out	0%	15%	5%	0%	0%	0%	0%	0%	0%	20%	0%	10%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	91	0	0	18	9	14	0	0	0	0	5	0	0
AM Out	27	0	4	1	0	0	0	0	0	0	5	0	3
PM In	40	0	0	8	4	6	0	0	0	0	2	0	0
PM Out	88	0	13	4	0	0	0	0	0	0	18	0	9

Zone #	3	0

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	0	0	0	0	0	0	0	0	0	0	0	0	0
PM In	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	0

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	0	0	0	0	0	0	0	0	0	0	0	0	0
PM In	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	2	Sierra Avenue at SR-210 Westbound Ramp

N

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	118	0	0	0	0	0	0	0	0	0	79
AM Out		0	0	0	0	187	125	0	0	0	0	0	0
AM Tot		0	118	0	0	187	125	0	0	0	0	0	79
PM In		0	209	0	0	0	0	0	0	0	0	0	139
PM Out		0	0	0	0	152	102	0	0	0	0	0	0
PM Tot		0	209	0	0	152	102	0	0	0	0	0	139

Zone #	1	Summit at Rosena

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		30%										20%
N	0%	0%	0%	0%	30%	20%	0%	0%	0%	0%	0%	0%
AM Out					30%	20%						
PM In	0%	30%	0%	0%	0%	0%	0%	0%	0%		0%	20%
PM Out	0%	0%	0%	0%	30%	20%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	303	0	91	0	0	0	0	0	0	0	0	0	61
AM Out	598	0	0	0	0	179	120	0	0	0	0	0	0
PM In	656	0	197	0	0	0	0	0	0	0	0	0	131
PM Out	420	0	0	0	0	126	84	0	0	0	0	0	0

Zone #	2	SEC Sierra / Clubhouse Dr - Warehouse

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		30%										20%
N	0%	0%	0%	0%	30%	20%	0%	0%	0%	0%	0%	0%
AM Out					30%	20%						
PM In	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%
PM Out	0%	0%	0%	0%	30%	20%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	91	0	27	0	0	0	0	0	0	0	0	0	18
AM Out	27	0	0	0	0	8	5	0	0	0	0	0	0
PM In	40	0	12	0	0	0	0	0	0	0	0	0	8
PM Out	88	0	0	0	0	26	18	0	0	0	0	0	0

Zone #	3	0

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	0	0	0	0	0	0	0	0	0	0	0	0	0
PM In	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	0

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	0	0	0	0	0	0	0	0	0	0	0	0	0
PM In	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Int. #:	3	Sierra Avenue at SR-210 Eastbound Ramp

N

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	30	0	0	0	0	88	0	0	0	0	0
AM Out		0	0	0	0	60	128	0	0	0	0	0	0
AM Tot		0	30	0	0	60	128	88	0	0	0	0	0
PM In		0	66	0	0	0	0	143	0	0	0	0	0
PM Out		0	0	0	0	42	110	0	0	0	0	0	0
PM Tot		0	66	0	0	42	110	143	0	0	0	0	0

Zone #	1	Summit at Rosena

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%					20%					
N	0%	0%	0%	0%	10%	20%	0%	0%	0%	0%	0%	0%
AM Out					10%	20%						
PM In	0%	10%	0%	0%	0%	0%	20%	0%	0%		0%	0%
PM Out	0%	0%	0%	0%	10%	20%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	303	0	30	0	0	0	0	61	0	0	0	0	0
AM Out	598	0	0	0	0	60	120	0	0	0	0	0	0
PM In	656	0	66	0	0	0	0	131	0	0	0	0	0
PM Out	420	0	0	0	0	42	84	0	0	0	0	0	0

Zone #	2	SEC Sierra / Clubhouse Dr - Warehouse

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In							30%					
N	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%
AM Out						30%						
PM In	0%	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	91	0	0	0	0	0	0	27	0	0	0	0	0
AM Out	27	0	0	0	0	0	8	0	0	0	0	0	0
PM In	40	0	0	0	0	0	0	12	0	0	0	0	0
PM Out	88	0	0	0	0	0	26	0	0	0	0	0	0

Zone #	3	0

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	0	0	0	0	0	0	0	0	0	0	0	0	0
PM In	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	4	0

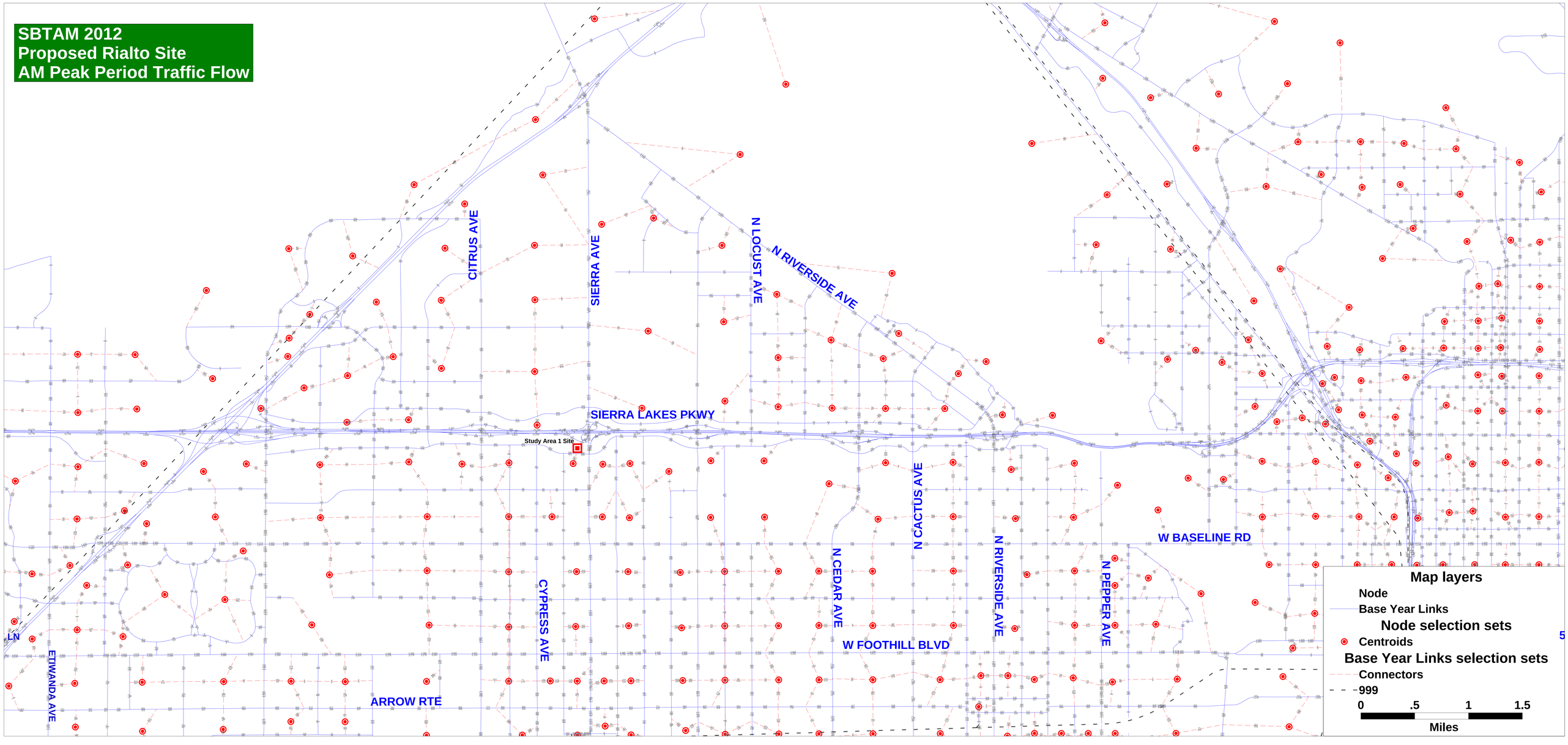
Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
N	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	0	0	0	0	0	0	0	0	0	0	0	0	0
PM In	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

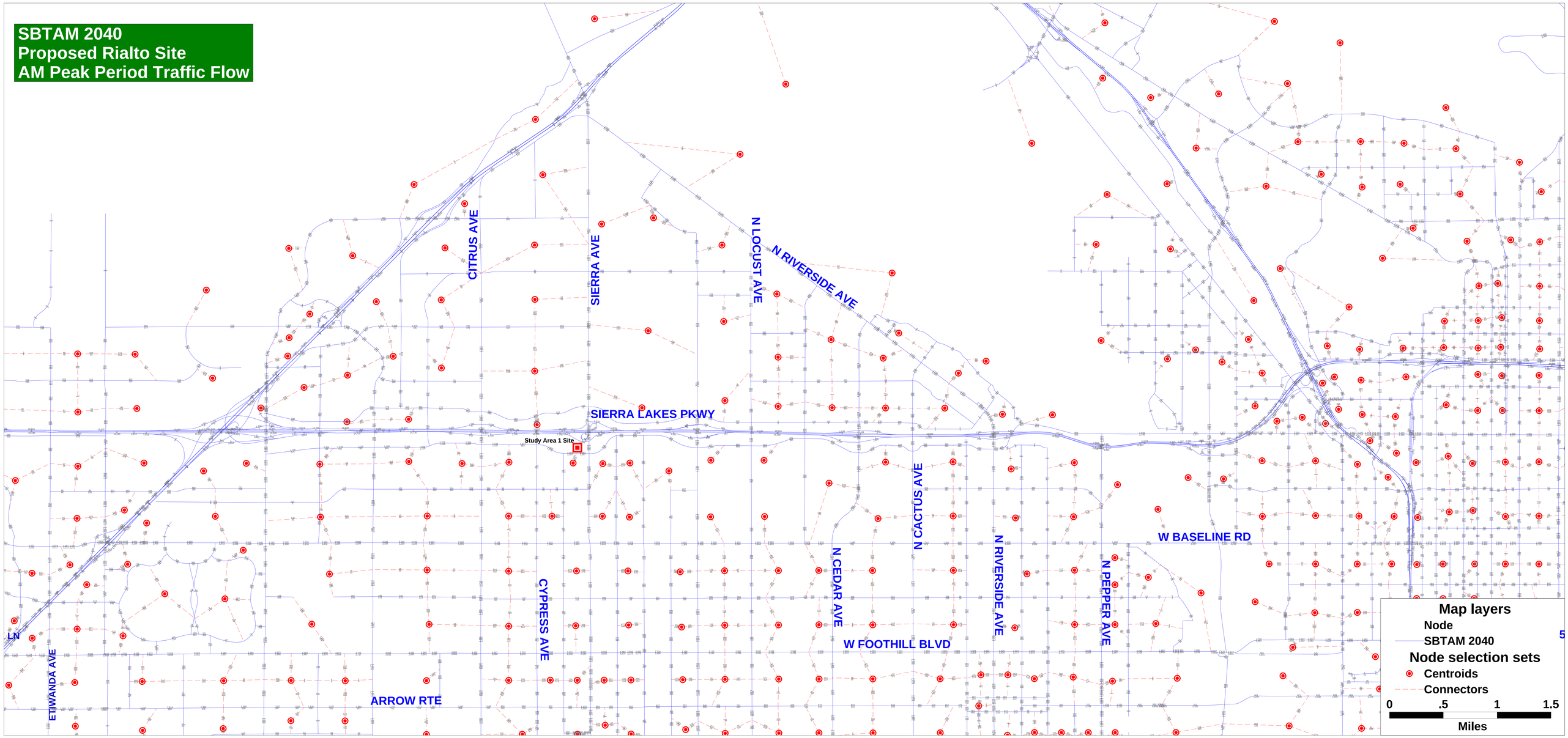
APPENDIX **E**

SBTAM MODEL PLOTS AND B-TURNS WORKSHEETS

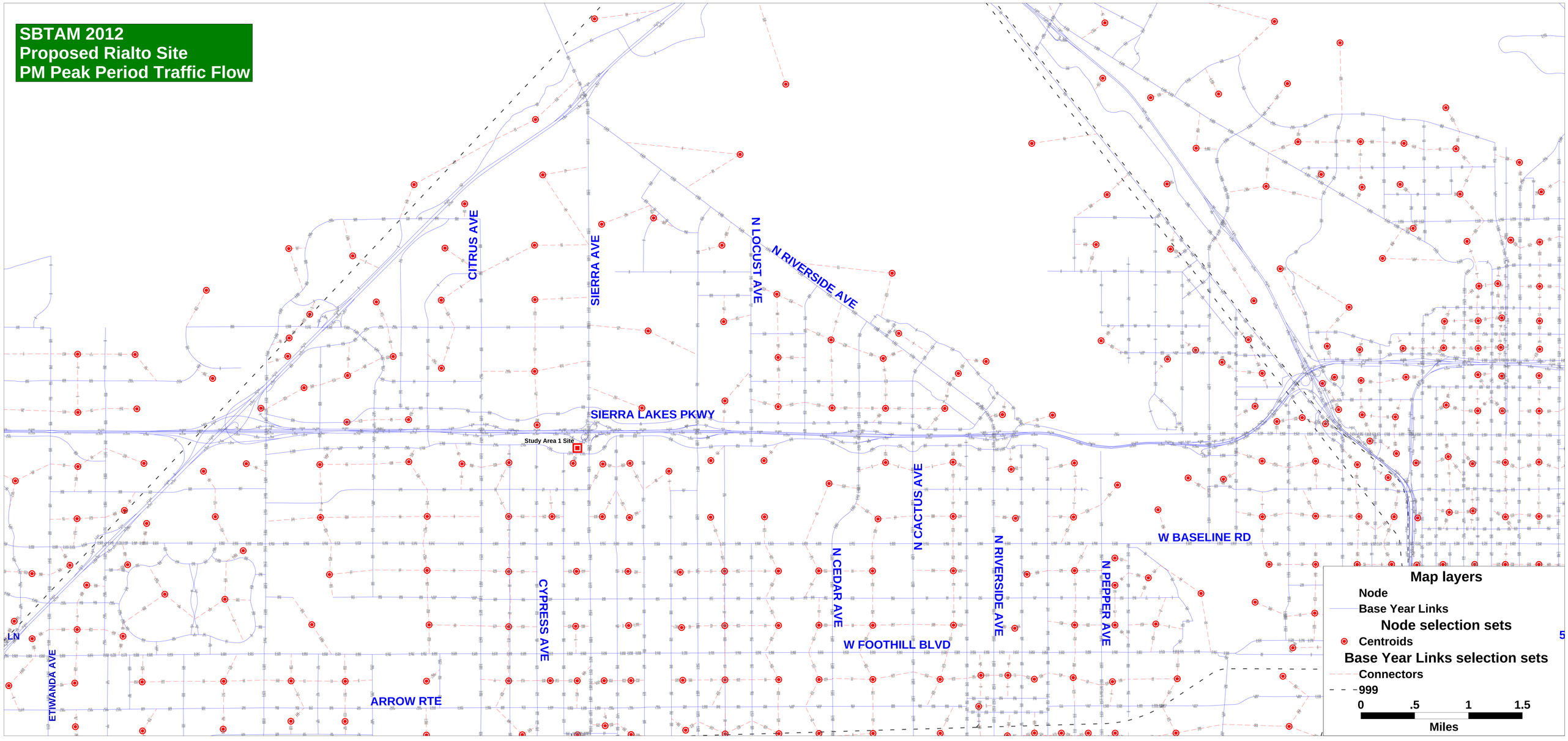
SBTAM 2012
Proposed Rialto Site
AM Peak Period Traffic Flow



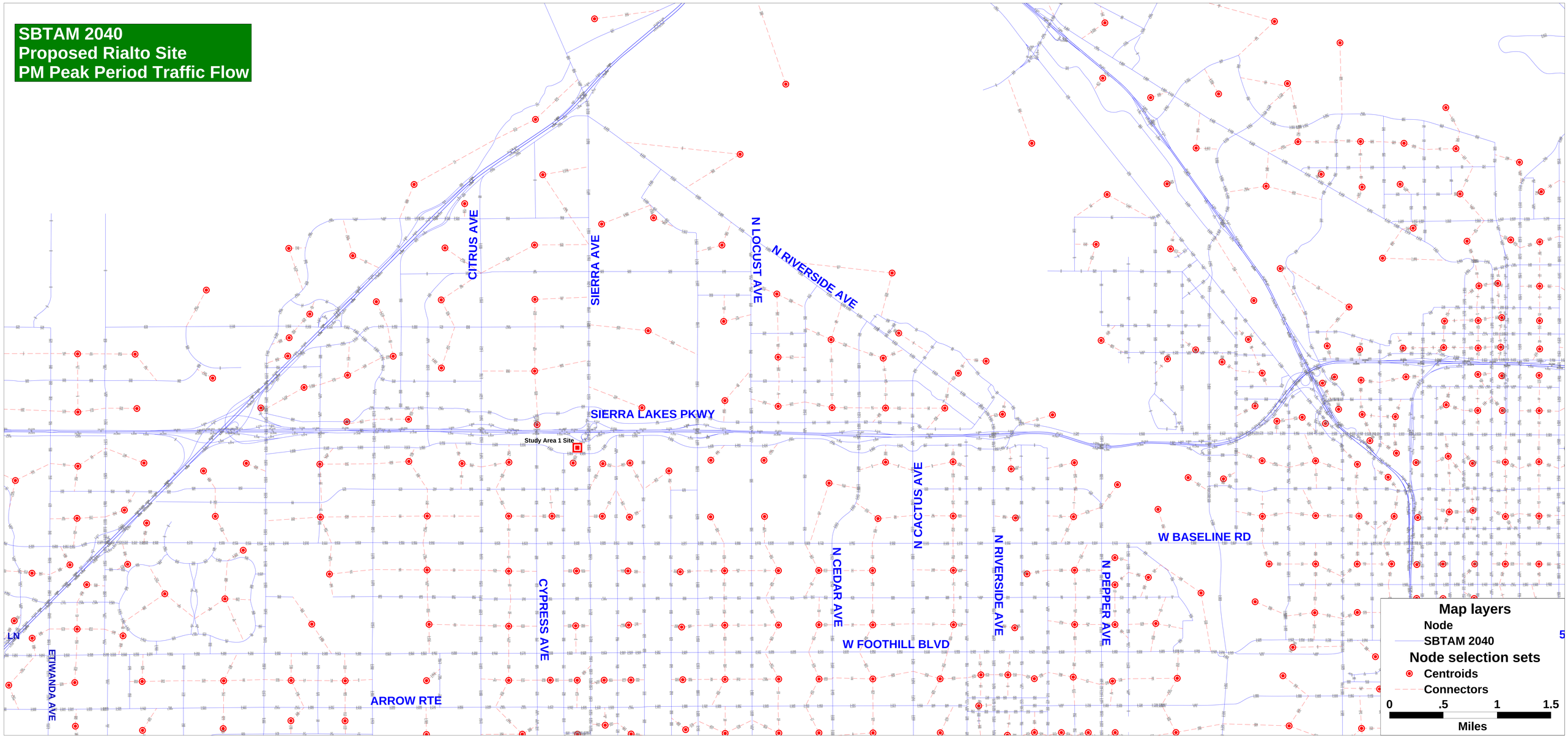
SBTAM 2040
Proposed Rialto Site
AM Peak Period Traffic Flow



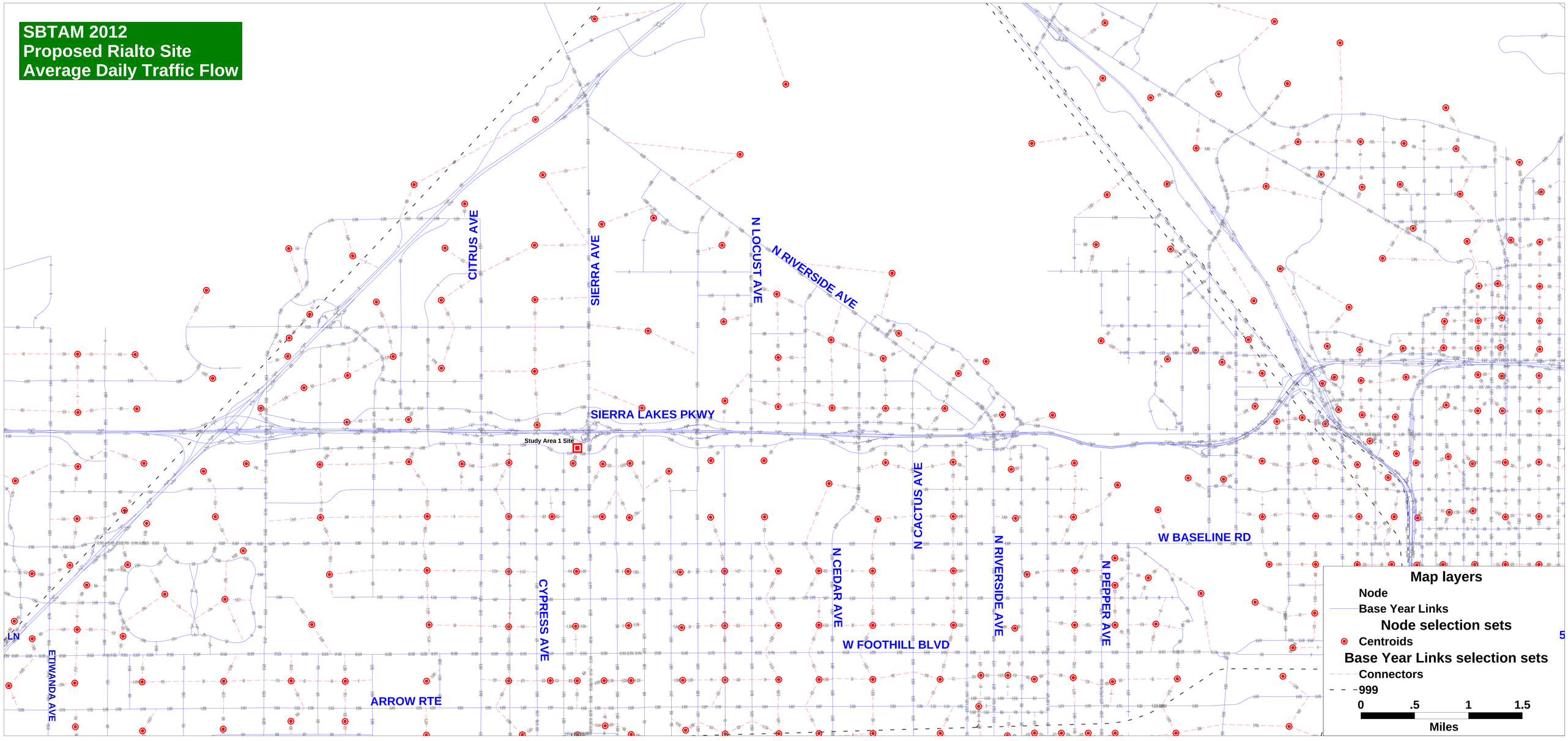
SBTAM 2012
Proposed Rialto Site
PM Peak Period Traffic Flow



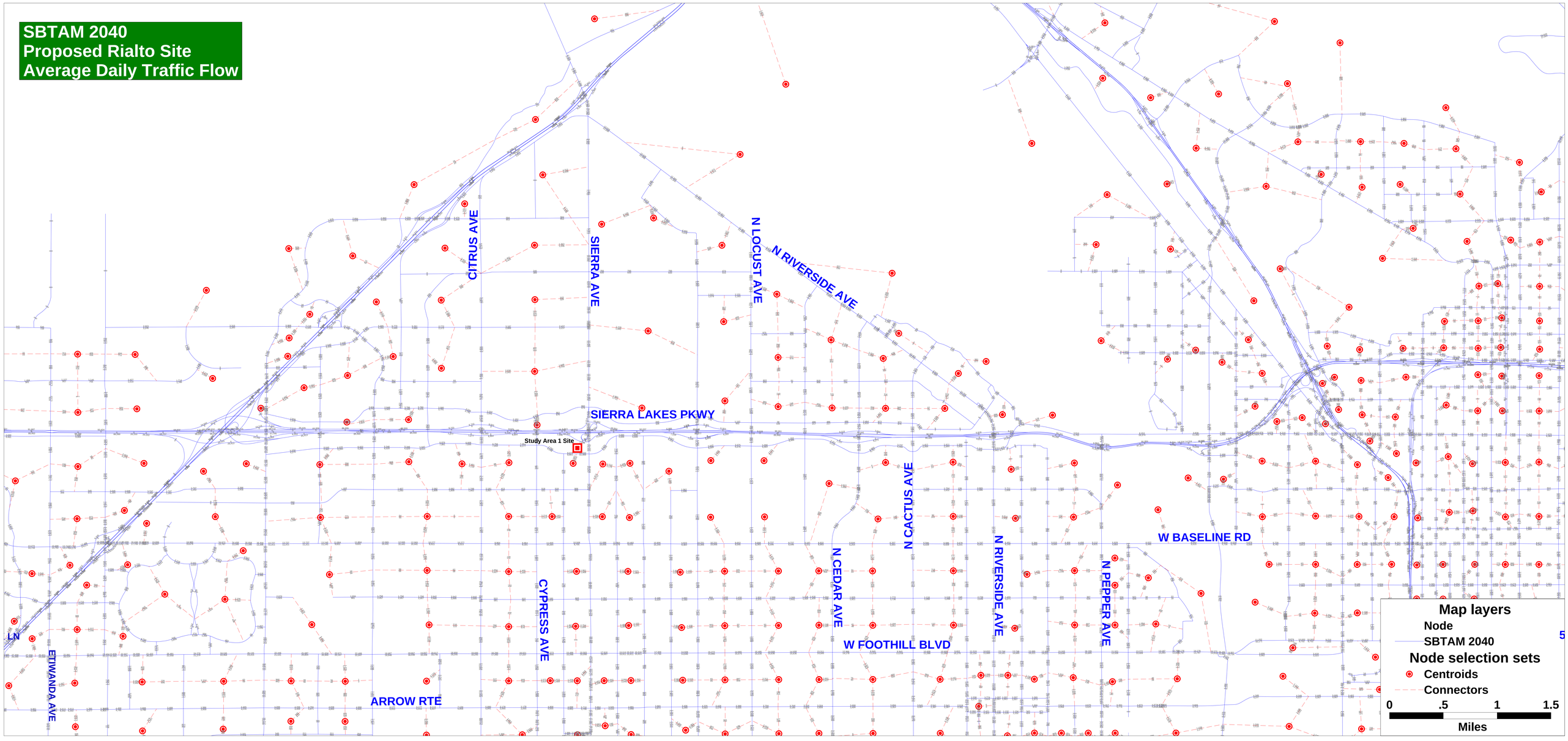
SBTAM 2040
Proposed Rialto Site
PM Peak Period Traffic Flow



SBTAM 2012
Proposed Rialto Site
Average Daily Traffic Flow



SBTAM 2040
Proposed Rialto Site
Average Daily Traffic Flow



Intersection: Sierra Ave Casa Grande Dr

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	414	IN ...	714
	RIGHT	28	OUT ...	1,001
SOUTH BOUND	LEFT	54	NORTH LEG	
	THRU	833	IN ...	1,017
	RIGHT	0	OUT ...	727
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	13
	RIGHT	0	OUT ...	12
WEST BOUND	LEFT	25	EAST LEG	
	THRU	0	IN ...	117
	RIGHT	45	OUT ...	120
		1,399		3,721

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	414	656
	RIGHT	28	54
SOUTH BOUND	LEFT	54	67
	THRU	833	956
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	25	45
	THRU	0	0
	RIGHT	45	72
		1,399	1,849

Intersection: Sierra Ave Casa Grande Dr

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	717	IN ...	901
	RIGHT	40	OUT ...	786
SOUTH BOUND	LEFT	26	NORTH LEG	
	THRU	461	IN ...	783
	RIGHT	0	OUT ...	886
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	47
	RIGHT	0	OUT ...	18
WEST BOUND	LEFT	31	EAST LEG	
	THRU	0	IN ...	102
	RIGHT	20	OUT ...	142
		1,295		3,667

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	717	844
	RIGHT	40	74
SOUTH BOUND	LEFT	26	68
	THRU	461	725
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	31	61
	THRU	0	0
	RIGHT	20	42
		1,295	1,815

Intersection: Sierra Ave SR-210 WB Ramp

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	693	IN ...	1,301
	RIGHT	374	OUT ...	1,231
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	1093	IN ...	1,398
	RIGHT	245	OUT ...	1,055
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	245
WEST BOUND	LEFT	4	EAST LEG	
	THRU	0	IN ...	206
	RIGHT	35	OUT ...	374
		2,444		5,809

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	693	884
	RIGHT	374	374
SOUTH BOUND	LEFT	0	0
	THRU	1,093	1,200
	RIGHT	245	245
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	4	31
	THRU	0	0
	RIGHT	35	171
		2,444	2,905

Intersection: Sierra Ave SR-210 WB Ramp

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	1,186	IN ...	1,838
	RIGHT	546	OUT ...	1,758
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	1,136	IN ...	1,703
	RIGHT	306	OUT ...	1,780
EAST BOUND	LEFT	0	WEST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	306
WEST BOUND	LEFT	386	EAST LEG	
	THRU	0	IN ...	849
	RIGHT	467	OUT ...	546
		4,027		8,781

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	1,186	1,298
	RIGHT	546	546
SOUTH BOUND	LEFT	0	0
	THRU	1,136	1,391
	RIGHT	306	306
EAST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
WEST BOUND	LEFT	386	367
	THRU	0	0
	RIGHT	467	482
		4,027	4,390

Intersection: Sierra Ave SR-210 EB Ramp

Condition: 2040 Build-out

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	902	IN ...	1,557
	RIGHT	434	OUT ...	2,004
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	1307	IN ...	1,763
	RIGHT	329	OUT ...	1,267
EAST BOUND	LEFT	144	WEST LEG	
	THRU	0	IN ...	574
	RIGHT	430	OUT ...	188
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	434
		3,546		7,787

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	902	1,125
	RIGHT	434	434
SOUTH BOUND	LEFT	0	0
	THRU	1,307	1,573
	RIGHT	329	188
EAST BOUND	LEFT	144	143
	THRU	0	0
	RIGHT	430	431
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		3,546	3,893

Intersection: Sierra Ave SR-210 EB Ramp

Condition: 2040 Build-out

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	0	SOUTH LEG	
	THRU	1,429	IN ...	2,153
	RIGHT	637	OUT ...	2,009
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	1,146	IN ...	1,820
	RIGHT	395	OUT ...	1,728
EAST BOUND	LEFT	212	WEST LEG	
	THRU	0	IN ...	687
	RIGHT	475	OUT ...	287
WEST BOUND	LEFT	0	EAST LEG	
	THRU	0	IN ...	0
	RIGHT	0	OUT ...	637
		4,294		9,321

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	0	0
	THRU	1,429	1,522
	RIGHT	637	637
SOUTH BOUND	LEFT	0	0
	THRU	1,146	1,529
	RIGHT	395	287
EAST BOUND	LEFT	212	206
	THRU	0	0
	RIGHT	475	480
WEST BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
		4,294	4,660

Kimley»Horn

MEMORANDUM

To:	Mahmoud Khodr, P.E., PTOE City of Fontana
From:	Trevor Briggs, P.E. Kimley-Horn and Associates, Inc.
Date:	June 4, 2020
Subject:	Traffic Memorandum for the Proposed Sierra Casa Grande Warehouse Residential Replacement Sites – Mango Avenue Site

The following memorandum was prepared to evaluate the trip generation potential and land use integration for the proposed residential replacement site located on the northwest corner (NWC) of Malaga Street and Mango Avenue (Mango Replacement Site) in the City of Fontana.

PROJECT DESCRIPTION

The project is proposing residential replacement sites for the development of residential dwelling units at two project sites within the City of Fontana in efforts to account for the potential residential dwelling units lost with the development of the proposed Sierra Avenue at Casa Grande Drive Warehouse. The two replacement sites are proposed within the City of Fontana and are shown on **Figure 1**. One replacement site is located on the northwest corner of the intersection of Mango Avenue at Malaga Street. The site is currently 5.69 acres and occupied by 14 existing residential dwelling units. The second replacement site, located on the northeast corner of the intersection of Palmetto Avenue at Arrow Boulevard (Palmetto Replacement Site), is mentioned in this memorandum yet analyzed a separate document.

The replacement of residential land uses due to the development of the Sierra Avenue at Casa Grande Drive Warehouse would result in the development of a maximum of 219 new residential dwelling units, in addition to the existing units on each site. The 219 dwelling units would be split proportionally between the two replacement sites as follows:

- Malaga Street/Mango Avenue Site: 195 new dwelling units
  - 14 existing dwelling units
  - **209 onsite total dwelling units**
  - **Proposed Residential Designation: WMXU-1: Walkable Mixed-Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)**
- Palmetto Avenue/Arrow Boulevard Site: 24 new dwelling units[1]
  - 8 existing dwelling units
  - **32 onsite total dwelling units**
  - **Proposed Residential Designation: -R-2: Medium Density Residential (5.1-12 du/ac)**

[1] The addition of 71 new dwelling units was initially estimated for this site and has since been refined to 24 units. The initial estimate of 71 dwelling units was conservatively used for trip generation analyses.

The City of Fontana *General Plan Land Use Map* as well as the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) was used to estimate the maximum trip generation for this proposed project. **Table 2** shows the estimated maximum trip generation of the replacement site, and the results are presented as follows:

- **1,427** Daily Trips
- AM Peak Hour – **90** Total Trips
- PM Peak Hour – **109** Total Trips

Based on the trip generation estimates for the proposed project site, a traffic study is not warranted.

SENATE BILL 330 (SB-330)

SB-330, approved in October 2019, is a new law in California that directly affects municipal control over housing development. The main purpose of the bill is to increase housing in California to keep up with the growing population, and does this by restricting measures that prevent low income housing from being built. In summary, the bill restricts cities and counties from taking measures that impede housing development, such as housing bans and downsizing, and expedites the permitting of housing in urbanized areas throughout California.

Within this bill, Governor Newsom has called for the following:

- An additional 180,000 homes annually to keep up with the population growth
- 3.5 million new homes to be built over the next 7 years

SB-330 directly applies to this Sierra Casa Grande Warehouse project, as the project decreases the potential amount of homes in the State of California, and specifically the City of Fontana. SB-330 requires the replacement of this housing at suitable sites within the City of Fontana.

TRIP GENERATION

The City of Fontana *General Plan Land Use Map* (adopted September 10, 2019) indicates that the 15.2-acre site of the proposed Sierra Avenue at Casa Grande Drive Warehouse project is currently designated as R-M: Medium Density Residential (5.1-12 du/ac). Were this site to be developed to its maximum existing land-use density, a total of 183 dwelling units could be developed. With the proposed change in land use to this warehouse site, the potential maximum of 183 dwelling units could be split proportionately and accommodated between the two replacement sites mentioned previously.

The Mango Replacement site (5.69 acres) is currently designated as R-SF: Single Family Residential (2.1-5 du/ac). The 195 replacement dwelling units and the retention of the 14 existing dwelling units on the site would yield a maximum 209 total dwelling units for a density of 36.7 du/ac. This density corresponds with the WMXU-1 Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac) designations found in the *General Plan Land Use Map.* The Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) was used to estimate the maximum trip generation for the Mango Replacement site. **Table 1** shows a summary of the site's existing and proposed land use designations and densities and **Table 2** shows the estimated maximum trip generation of the Mango Replacement site.

Table 1: Existing and Proposed Site Designations

Site	Size (ac)	Existing Land Use Designation	Existing Dwelling Units	Maximum Potential/New Residential Dwelling Units	Proposed Maximum Dwelling Units	Proposed Land Use Designation
Sierra Ave at Casa Grande Dr Warehouse	15.2	R-M: medium Density Residential (5.1-12 du/ac)	0	183	-	I-L: Light Industrial (0.1-0.6 FAR)
Mango Replacement Site[1]	5.69	R-SF: Single Family Residential (2.1-5 du/ac)	14	195	209	WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)
Notes: *du = Dwelling Unit* *ac = acre* *[1] An additional 24 du would be replaced at the Palmetto Replacement site.*						

Table 2: Estimated Maximum Mango Replacement Site Trip Generation

				Trip Generation Rates and Estimates						
					AM Peak Hour			PM Peak Hour		
	Land Use		Unit	Daily	In	Out	Total	In	Out	Total
Rates	Multifamily Housing (Low-Rise)	**ITE Code** 220	DU	7.320	0.106	0.354	0.46	0.353	0.207	0.56
Estimates	Multifamily Housing (Low-Rise)	**Quantity** 195	DU	1,427	21	69	90	69	40	109
Total Project Trips				1,427	21	36	90	69	40	109

GENERAL ACCESS TO THE SITE ON ROADWAYS

Access to the parcel would be from Malaga Street and Mango Avenue. These streets each have one travel lane in each direction with no sight distance limitations. The proposed project site is at the center of 5 major freeways; CA-210 to the north, I-10 and CA-66 (Foothill Boulevard) to the south, CA-259 to the east, and I-15 to the west. These freeways can take residents from the project site to local locations around the City of Fontana and to different cities such as Los Angeles, Temecula, San Bernardino, or Victorville. To access the all freeways, residents would head north on Sierra Avenue to reach the CA-259 or I-15 onramps, which connect to the CA-210, I-10, and CA-66. The drives from the project location to the CA-259 and I-15 freeway onramps total a 10- to 15-minute trip each.

Three OminTrans transit routes are located within walking distance of the site. Routes 67 and 82 operate on Sierra Avenue with bus stops within 0.2 miles of the site. These routes operate at 1 hour headways and both provide a connection to the Fontana Metrolink station, approximately 1.25 miles to the south. These route schedules are staggered to provide service every 30 minutes. OmniTrans Route 14 has stops on Foothill Boulevard, approximately 0.3 miles from the project site. Route 14 operates at 15-minute headways and provides connections to the San Bernardino Transit Center, the OmniTrans Metro Station and the Fontana Metrolink Station, as well as Fontana City Hall.

Throughout the City of Fontana, the project site location is easily accessible to Grocery Stores, Schools, Downtown Fontana, and Community Parks. To access these locations, residents are close to major east-west corridors through the City: Baseline Avenue, to the north of the site and Foothill Boulevard to the south. Sierra Avenue, running north to south through the City, is one block west of the site. Overall, the project site is located within walking distance to commercial and retail centers along Foothill Boulevard and is central to employment centers within the City.

LAND USE INTEGRATION

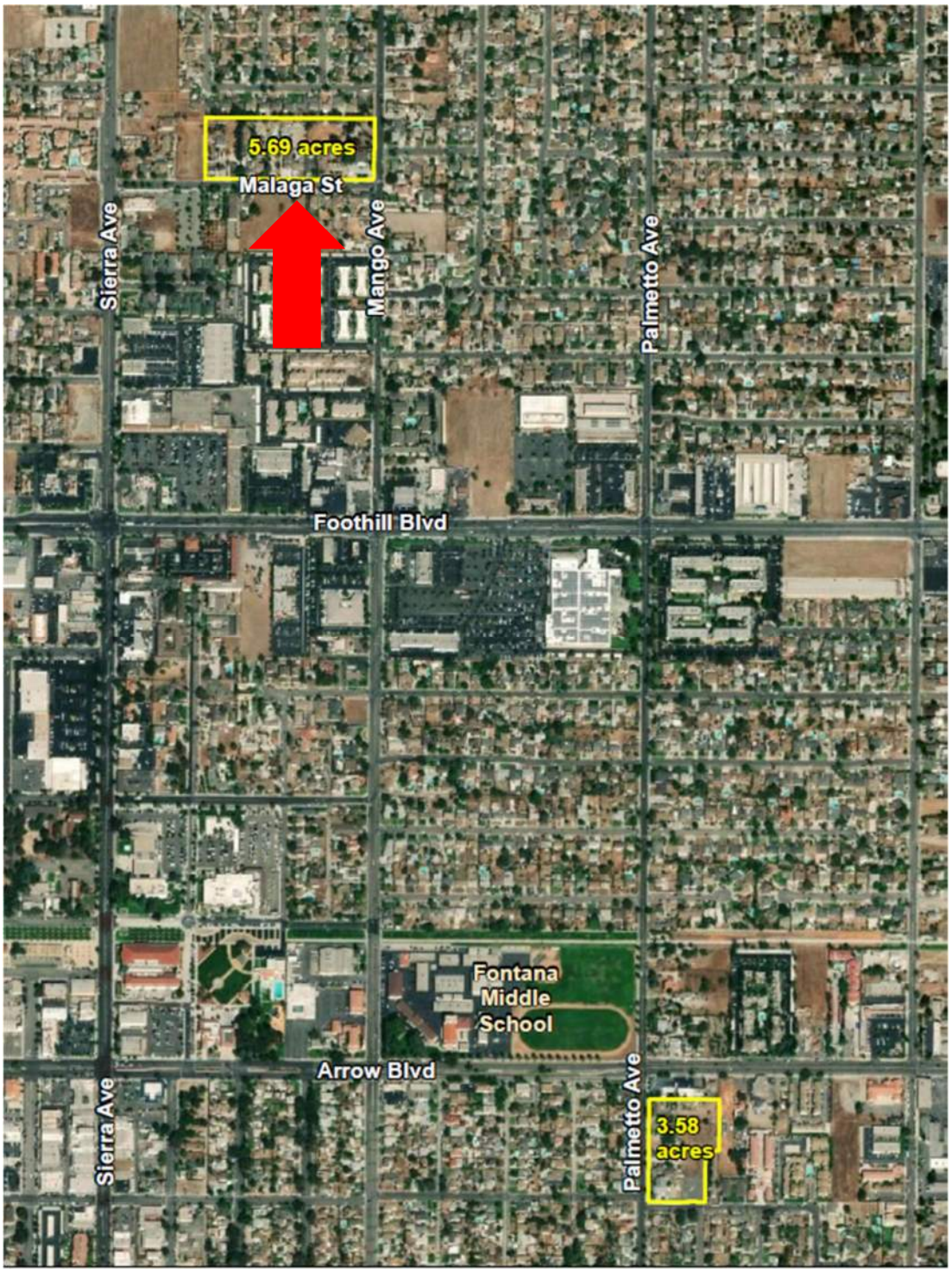
According to the *General Plan Land Use Map*, the project location is surrounded by R-SF: Single Family Residential land use to the north and east, and WMXU-1: Walkable Mixed-Use Corridor & Downtown designations to the south and west. Re-designation of the site from R-SF: Single Family Residential to WMXU-1: Walkable Mixed-Use Corridor & Downtown would be consistent with the surrounding land-use designations and walkable residential nature of the proposed replacement site.

CONCLUSION

According to Appendix B of San Bernardino County's Congestion Management Plan (CMP), "TIA Reports shall be prepared by local jurisdictions when local criteria and thresholds indicate they are necessary. However, TIA reports must be prepared to satisfy CMP requirements, except as noted below, when a proposed change in land use, development project, or at a local discretion, a group of projects are forecast to equal or exceed the CMP threshold of 250 two-way peak hour trips generation, based on trip generation rates published for the applicable use of uses in the Institute of Transportation Engineers' Trip Generation or CMA-approved data source."

The sum of the two-way peak hour trips for the proposed Mango Replacement site is estimated to be less than the 250-trip threshold set forth by the County of San Bernardino. Therefore, a traffic study would not be warranted for this proposed project based on San Bernardino County's CMP thresholds.

Figure 1 - Project Location



Kimley»Horn

MEMORANDUM

To:	Mahmoud Khodr, P.E., PTOE City of Fontana
From:	Trevor Briggs, P.E. Kimley-Horn and Associates, Inc.
Date:	June 4, 2020
Subject:	Traffic Memorandum for the Proposed Sierra Casa Grande Warehouse Residential Replacement Sites – Palmetto Avenue Site

The following memorandum was prepared to evaluate the trip generation potential and land use integration for the proposed residential replacement site located on the northeast corner (NEC) of Palmetto Avenue and Valencia Avenue (Palmetto Replacement site) in the City of Fontana.

PROJECT DESCRIPTION

The project is proposing residential replacement sites for the development of residential dwelling units at two project sites within the City of Fontana in efforts to account for the potential residential dwelling units lost with the development of the proposed Sierra Avenue at Casa Grande Drive Warehouse. The two replacement sites are proposed within the City of Fontana and are shown on **Figure 1.** One replacement site is located on the northeast corner of the intersection of Palmetto Avenue at Valencia Avenue. The site is currently 3.58 acres and occupied by 8 existing residential dwelling units and a church building. The other replacement site, located on the northwest corner of the intersection of Mango Avenue at Malaga Street (Mango Replacement site), is mentioned in this memorandum yet analyzed in a separate document.

The replacement of residential land uses due to the development of the Sierra Avenue at Casa Grande Drive Warehouse would result in the development of 219 new residential dwelling units, in addition to the existing units on each site. The 219 dwelling units would be split proportionally between the two replacement sites as follows:

- Malaga Street/Mango Avenue Site: 195 new dwelling units
  - 14 existing dwelling units
  - **209 onsite total dwelling units**
  - **Proposed Residential Designation: WMXU-1: Walkable Mixed-Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)**
- Palmetto Avenue/Arrow Boulevard Site: 24 new dwelling units[1]
  - 8 existing dwelling units
  - **32 onsite total dwelling units**
  - **Proposed Residential Designation: R-2: Medium Density Residential (5.1-12 du/ac)**

[1] The addition of 71 new dwelling units was initially estimated for this site and has since been refined to 24 units. The initial estimate of 71 dwelling units was conservatively used for trip generation analyses.

The City of Fontana *General Plan Land Use Map* as well as the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) was used to estimate the maximum trip generation for this proposed project. **Table 2** shows the estimated maximum trip generation of the replacement site, based on an initial estimate of 71 dwelling units, and the results are presented as follows:

- **520** Daily Trips
- AM Peak Hour – **33** Total Trips
- PM Peak Hour – **40** Total Trips

Based on the trip generation estimates for the proposed project site, a traffic study is not warranted.

SENATE BILL 330 (SB-330)

SB-330, approved in October 2019, is a new law in California that directly affects municipal control over housing development. The main purpose of the bill is to increase housing in California to keep up with the growing population, and does this by restricting measures that prevent low income housing from being built. In summary, the bill restricts cities and counties from taking measures that impede housing development, such as housing bans and downsizing, and expedites the permitting of housing in urbanized areas throughout California.

Within this bill, Governor Newsom has called for the following:

- An additional 180,000 homes annually to keep up with the population growth
- 3.5 million new homes to be built over the next 7 years

SB-330 directly applies to this Sierra Casa Grande Warehouse project, as the project decreases the potential amount of homes in the State of California, and specifically the City of Fontana. SB-330 requires the replacement of this housing at suitable sites within the City of Fontana.

TRIP GENERATION

The City of Fontana *General Plan Land Use Map* (adopted September 10, 2019) indicates that the 15.2-acre site of the proposed Sierra Avenue at Casa Grande Drive Warehouse project is currently designated as R-M: Medium Density Residential (5.1-12 du/ac). Were this site to be developed to its maximum existing land-use density, a total of 183 dwelling units could be developed. With the proposed change in land use to this warehouse site, the potential maximum of 183 dwelling units could be split proportionately and accommodated between the two replacement sites mentioned previously.

The Palmetto Replacement site (3.58 acres) is currently designated as R-SF: Single Family Residential (2.1-5 du/ac). The 71 replacement dwelling units and the retention of the 8 existing dwelling units on the site would yield a maximum 79 total dwelling units for a density of 22.0 du/ac. This density corresponds with the R-MF: Multi Family Residential (12.1-24 du/ac) or WMXU-1 Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac) designations found in the *General Plan Land Use Map.* The Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) was used to estimate the maximum trip generation for the Palmetto Replacement site. **Table 1** shows a summary of the site's existing and proposed land use designations and densities and **Table 2** shows the estimated maximum trip generation of the Palmetto Replacement site.

Table 1: Existing and Proposed Site Designations

Site	Size (ac)	Existing Land Use Designation	Existing Dwelling Units	Maximum Potential/New Residential Dwelling Units	Proposed Maximum Dwelling Units	Proposed Land Use Designation
Sierra Ave at Casa Grande Dr Warehouse	15.2	R-M: medium Density Residential (5.1-12 du/ac)	0	183	-	I-L: Light Industrial (0.1-0.6 FAR)
Palmetto Replacement Site[1]	5.69	R-SF: Single Family Residential (2.1-5 du/ac)	8	71	79	R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)

Notes:
du = Dwelling Unit
ac = acre
[1] An additional 195 du would be replaced at the Mango Replacement site.

Table 2: Estimated Maximum Palmetto Replacement Site Trip Generation

				Trip Generation Rates and Estimates						
					AM Peak Hour			PM Peak Hour		
	Land Use		Unit	Daily	In	Out	Total	In	Out	Total
Rates	Multifamily Housing (Low-Rise)	**ITE Code** 220	DU	7.320	0.106	0.354	0.46	0.353	0.207	0.56
Estimates	Multifamily Housing (Low-Rise)	**Quantity** 71	DU	520	8	25	33	25	15	40
Total Project Trips				520	8	25	33	25	15	40

GENERAL ACCESS TO THE SITE ON ROADWAYS

Access to the parcel would be from Palmetto Avenue and Valencia Avenue to the south. Both streets have one lane in each direction. It is suggested that project access onto Palmetto Avenue be restricted within the 200 feet of Arrow Boulevard to not conflict with the northbound left-turn lane at the signalized intersection. The proposed project site is surrounded by 5 major freeways; CA-210 and CA-66 (Foothill Boulevard) to the north, I-10 to the south, CA-259 to the east, and I-15 to the west. These freeways can take residents from the project site to local locations around the City of Fontana to different cities such as Los Angeles, Temecula, San Bernardino, or Victorville. To access all freeways, residents would head east onto Palmetto Avenue, turn north onto Sierra Avenue, and follow the corridor to the CA-259 or I-15 onramps, which connect to the CA-210, I-10, and CA-66. The drive from the project location to the CA-259 and I-15 freeway onramps total a 15- to 20-minute trip each.

OmniTrans Route 12 operates at one-hour headways along Arrow Boulevard, with bus stops about 0.1 miles from the project. This route provides connections to the Fontana Metrolink Station, which is about ¾ mile southwest of the project.

Throughout the City of Fontana, the project site location is easily accessible to Schools, Grocery Stores, Downtown Fontana, and Community Parks. To access these locations, residents are close to major corridors that run throughout the entire city; Foothill Boulevard, running east to west, is just north of Arrow Boulevard, and Sierra Avenue, running north to south, is two blocks west of Palmetto Avenue. Additionally, the proposed project site is within walking distance to Fontana Middle School as well as commercial and retail centers along Arrow Boulevard that are central to the City.

LAND USE INTEGRATION

According to the *General Plan Land Use Map*, the project location is surrounded by R-SF: Single Family Residential land use to south, east, and west, R-M: Medium Density Residential to the north, and P-PF: Public Facilities and WMXU-1: Walkable Mixed-Use Corridor & Downtown designations to the northwest. Re-designation of the site from R-SF: Single Family Residential to R-MF: Multi-Family Residential (12.1-24 du/ac) or WMXU-1: Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac) would be consistent with the surrounding land-use designations and walkable residential nature of the proposed replacement site.

CONCLUSION

According to Appendix B of San Bernardino County's *Congestion Management Plan (CMP)*, "TIA Reports shall be prepared by local jurisdictions when local criteria and thresholds indicate they are necessary. However, TIA Reports must be prepared to satisfy CMP requirements, except as noted below, when a proposed change in land use, development project, or at local discretion, a group of projects are forecast to equal or exceed the CMP threshold of 250 two-way peak hour trips generation, based on trip generation rates published for the applicable use of uses in the Institute of Transportation Engineers' Trip Generation or CMA-approved data source."

The sum of the two-way peak hour trips for the proposed Palmetto Replacement site is estimated to be less than the 250-trip threshold set forth by the County of San Bernardino, therefore, a traffic study would not be warranted for this proposed project based on the San Bernardino County's CMP thresholds.

Figure 1 - Project Location

