AIR QUALITY AND GREENHOUSE GAS STUDY

CONVENIENCE STORE, RETAIL FUEL SALES, & FAST FOOD RESTAURANT 11279 CEDAR AVENUE, BLOOMINGTON, CALIFORNIA SAN BERNARDINO COUNTY

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1. INTRODUCTION & PROJECT DESCRIPTION

The purpose of this report is to provide an air quality and greenhouse gas study related to the construction and subsequent operation of a convenience store, retail gasoline sales area consisting of eight pumps, and a fast-food restaurant on a 2.32-acre site located in the unincorporated community of Bloomington. The proposed project will consist of a gasoline sales area that would feature eight fuel pumps, a convenience store, an automated carwash, a drive-thru restaurant, and a small storage building. The convenience store would have a total floor area of 5,000 square feet, and would include a sales area and quick service restaurant (QSR) area inside the store. The proposed fast-food and drive through restaurant would have a total floor area of 2,550 square feet. The automated carwash tunnel would consist of 2,634 square feet. Finally, a 2,244 square foot storage building would be located in the site's northwest corner. The site would also include a retail fuel sales area consisting of eight (8) pumps with a total of sixteen (16) fueling positions. This fuel sales area would be located under a canopy near the corner of Jurupa Road and Cedar Avenue.

The project site consists of a single undeveloped parcel that encompasses a total of 2.32 acres. The project site is located at the northeast corner of Jurupa Avenue and Cedar Avenue. The site's legal address is 11279 Cedar Avenue. The site's corresponding Assessor Parcel Number (APN) is 0257-101-09. This report consists of the following sections:

- *Section 1 - Introduction & Project Description,* provides an overview of the report's format and content, and summarizes the proposed project.

- *Section 2 - Project Site Location & Setting,* includes a description of the project site's location and its environmental setting.

- *Section 3 - Air Quality Analysis,* evaluates the potential air quality impacts associated with the construction and subsequent occupancy of the proposed project. The analysis considers both the short-term (construction-related) and long-term (operational) air quality impacts.

- *Section 4 - Greenhouse Gas (GHG) Emissions Analysis,* discusses the potential GHG emissions impacts associated with the proposed project's construction and subsequent occupancy.

- *Section 5 - Summary & Conclusions,* includes a summary of the project and analysis and presents the findings of the analysis.

2. PROJECT SITE LOCATION & ENVIRONMENTAL SETTING

The project site is located within the southwestern portion of San Bernardino County, on the northeast corner of Cedar Avenue and Jurupa Avenue located in the unincorporated community of Bloomington. The site is located north of Jurupa Avenue and east of Cedar Avenue. The property is located approximately 1.3 miles south of the San Bernardino Freeway (I-10) via Cedar Avenue. The project site is located at the northeast corner of Jurupa Avenue and Cedar Avenue. The site's legal address is 11279 Cedar Avenue while the corresponding Assessor Parcel Number (APN) is 0257-101-09. The location of the Community of Bloomington in a regional context is shown in Exhibit 1, a local map is provided in Exhibit 2, and an aerial map is provided in Exhibit 3.

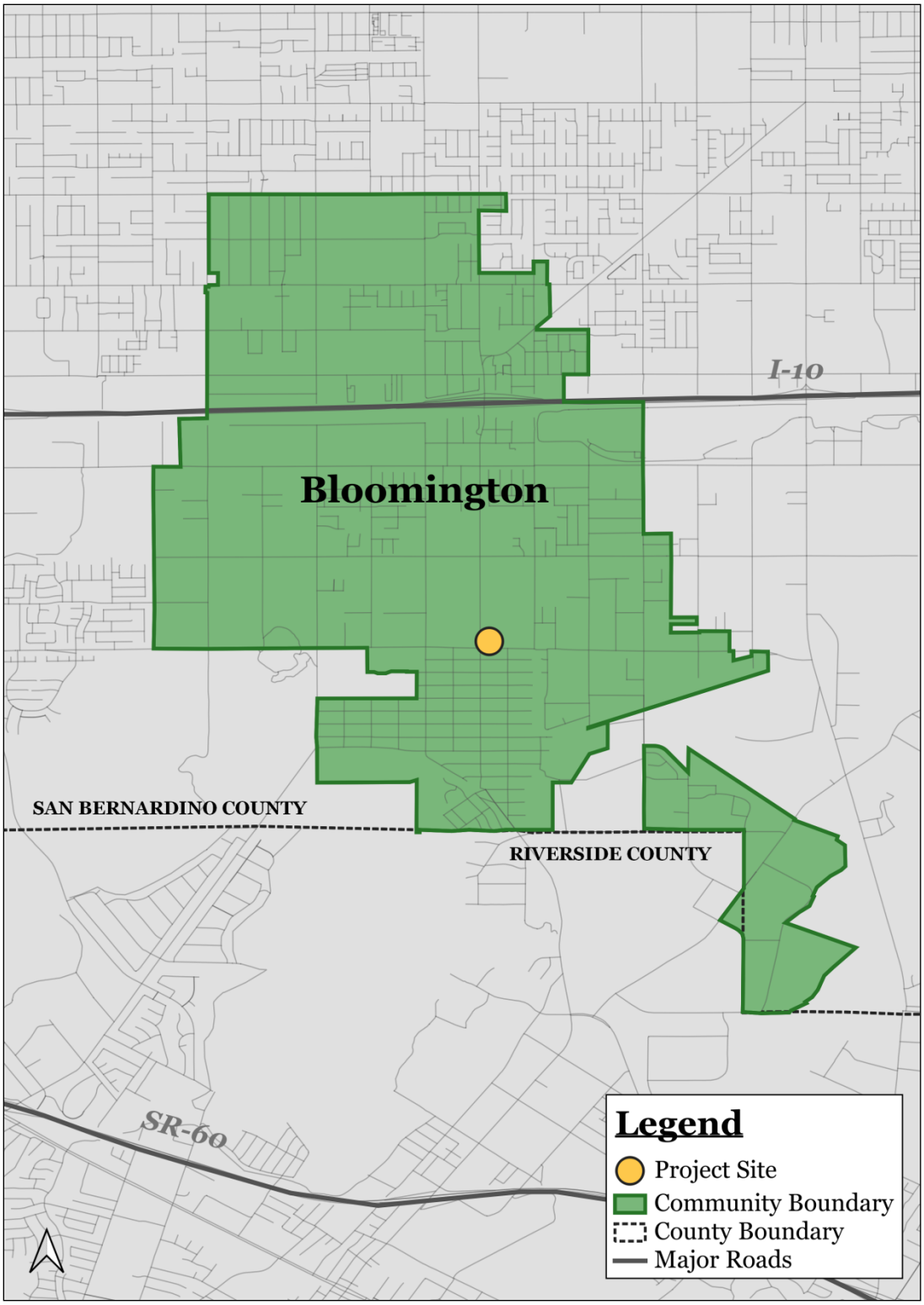

EXHIBIT 1
REGIONAL LOCATION MAP
Source: Blodgett Baylosis Environmental Planning

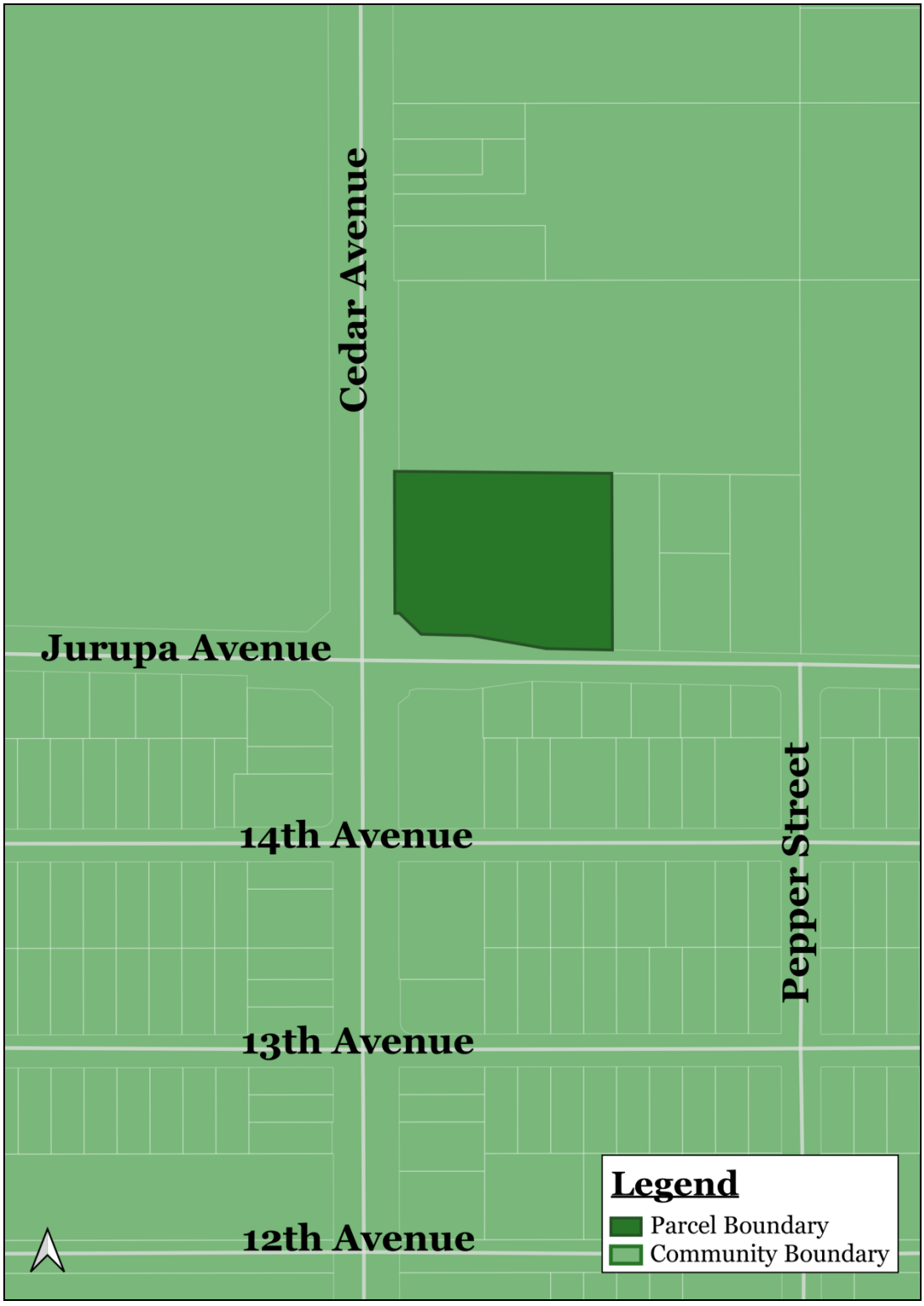

EXHIBIT 2
LOCAL MAP
Source: Blodgett Baylosis Environmental Planning

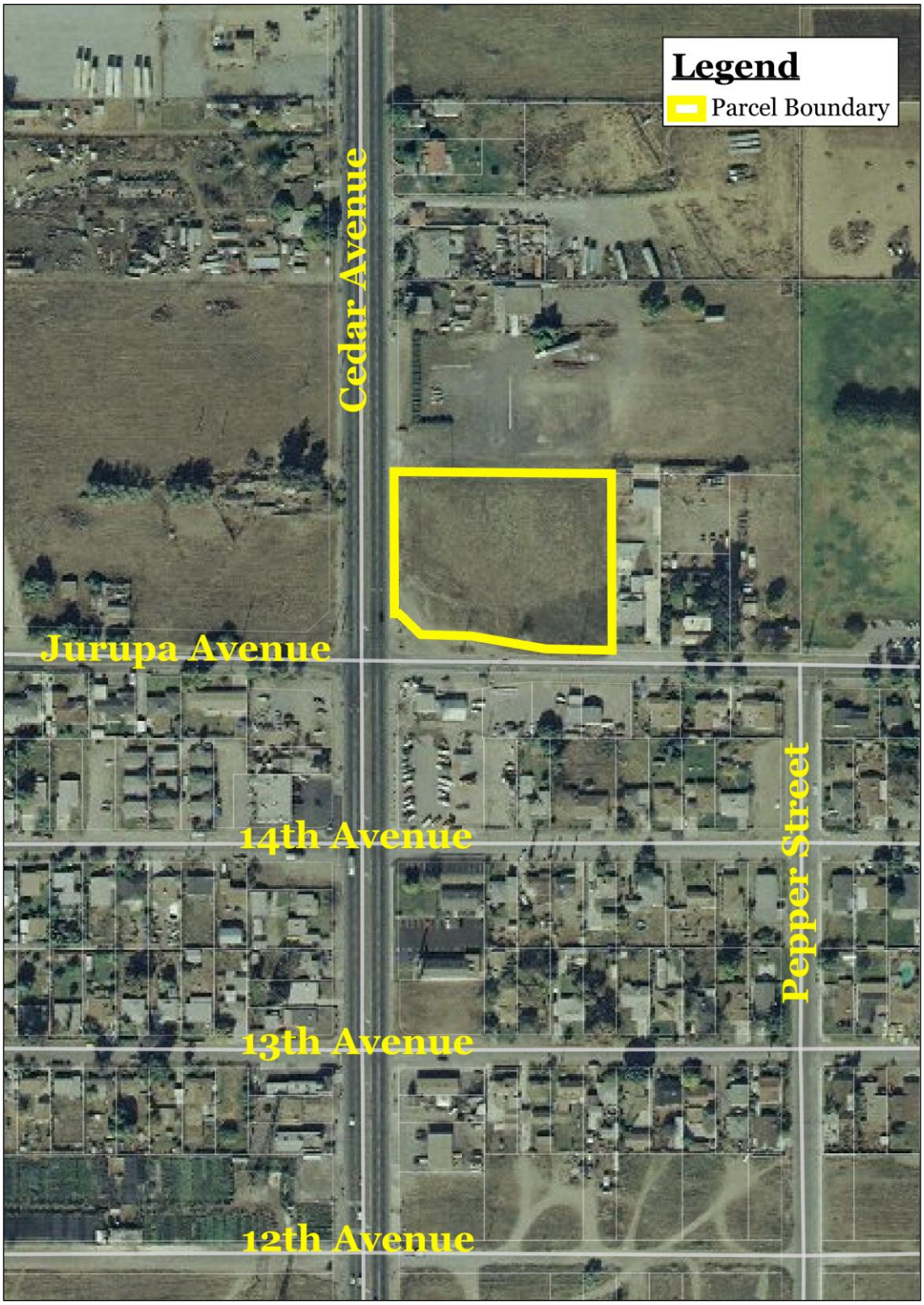

EXHIBIT 3
AERIAL MAP
Source: Blodgett Baylosis Environmental Planning

The project site is currently vacant though it has been graded and hydro-seeded to prevent erosion. The surrounding land uses are described in detail below:[2]

- *North of the site.* A trucking yard, RWI Transportation, is located to the north of the property. This business is located at 11205 Cedar Avenue.

- *South of the site*. Jurupa Avenue extends along the site's south side. Further south, on the south side of Jurupa Avenue, is a commercial land use (Little Truck Sales, 11311 Cedar Avenue). Residential uses are located further east.

- *East of the site.* Residential uses are located to the east of the site. The Crestview Elementary School is located approximately 600 feet to the east of the site.

- *West of the site*. Cedar Avenue extends along the project site's west side. Further west of Cedar Avenue, is the Bloomington Business Center.[3]

3. AIR QUALITY ANALYSIS

3.1 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project may be deemed to have a significant environmental impact on air quality if it results in any of the following:

- A conflict with the obstruction of the implementation of the applicable air quality plan;

- A violation of an air quality standard or contribute substantially to result in a cumulatively considerable net increase in an existing or projected air quality violation;

- The exposure of sensitive receptors to substantial pollutant concentrations; or,

- The result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people.

The South Coast Air Quality Management District (SCAQMD) has established quantitative thresholds for short-term (construction) emissions and long-term (operational) emissions for the following criteria pollutants:

- *Ozone (O_3)* is a nearly colorless gas that irritates the lungs, damages materials, and vegetation. Ozone is formed by a photochemical reaction when nitrogen dioxide is broken down by sunlight.

- *Carbon monoxide (CO)* is a colorless, odorless toxic gas that interferes with the transfer of oxygen to the brain and is produced by the incomplete combustion of carbon-containing fuels emitted as vehicle exhaust.

[2] Blodgett Baylosis Environmental Planning. *Site survey*. Survey was conducted on December 30, 2019.

[3] Google Earth. Website Accessed April 25, 2020.

- *Nitrogen dioxide (NO_2)* is a yellowish-brown gas, which at high levels can cause breathing difficulties. NO_2 is formed when nitric oxide (a pollutant from internal combustion) combines with oxygen.

- *Sulfur dioxide* (SO_2) is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Health effects include acute respiratory symptoms and difficulty in breathing for children.

- *PM_{10} and $PM_{2.5}$* refers to particulate matter less than ten microns and two and one-half microns in diameter, respectively. Particulates of this size cause a greater health risk than larger-sized particles since fine particles can more easily cause irritation.

- *Lead* is a naturally occurring heavy metal found in the environment as well as being derived from certain products. The major sources of lead emissions have historically included motor vehicle fuels and various industrial sources. Due to the phasing out of leaded gasoline and lead based paints, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure to lead can adversely affect the physical development of infants.

In addition to the aforementioned criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. The California Health and Safety Code (HSC) Section 39655 defines a toxic air contaminant as "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health."[22] Impacts from toxic air contaminants can occur during either the construction or operational phases of a project. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, along with certain commercial operations such as automotive repair shops, dry cleaners, gasoline stations and dry cleaners. Cars and trucks release at least forty different toxic air contaminants; the most important of these toxic air contaminants, in terms of health risk, include diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde from fuel products. Public exposure to toxic air contaminants can result from emissions from normal operations as well as from accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

The majority of the estimated health risks from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). DPM is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or “soot”. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California’s potential airborne cancer risk from combustion sources.

Asbestos is also listed as a TAC by the ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and from crushing or breaking rocks containing these minerals through construction or other means, and releasing asbestos fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials (ACMs), road surfacing with such materials, grading activities, and surface mining. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in San Bernardino County. Manmade sources of ACMs may be encountered during the demolition of older buildings

that may contain these materials (ACMs were often used in insulation, floor tiles, and other building products). No older buildings are located on the project site.

Projects in the South Coast Air Basin (SCAB) generating construction-related emissions that exceed any of the following emissions thresholds are considered to be significant under CEQA:

- 75 pounds per day of reactive organic compounds;
- 100 pounds per day of nitrogen dioxide;
- 550 pounds per day of carbon monoxide;
- 150 pounds per day of PM_{10};
- 55 pounds per day of $PM_{2.5}$; or,
- 150 pounds per day of sulfur oxides.

A project would have a significant effect on air quality if any of the following operational emissions thresholds for criteria pollutants are exceeded:

- 55 pounds per day of reactive organic compounds;
- 55 pounds per day of nitrogen dioxide;
- 550 pounds per day of carbon monoxide;
- 150 pounds per day of PM_{10};
- 55 pounds per day of $PM_{2.5}$; or,
- 150 pounds per day of sulfur oxides.

3.2 ENVIRONMENTAL ANALYSIS

A. Would the project conflict with or obstruct implementation of the applicable air quality plan? ● Less than Significant Impact.

The project site is located within the South Coast Air Basin (SCAB), which covers a 6,600 square-mile area within Los Angeles, the non-desert portions of Los Angeles County, Riverside County, and San Bernardino County.[4] Measures to improve regional air quality are outlined in the SCAQMD's Air Quality Management Plan (AQMP).[5] The most recent AQMP was adopted in 2017 and was jointly prepared with the California Air Resources Board (CARB) and the Southern California Association of Governments (SCAG).[6] The AQMP will help the SCAQMD maintain focus on the air quality impacts of major projects associated with goods movement, land use, energy efficiency, and other key areas of growth. Key elements of the 2016 AQMP include enhancements to existing programs to meet the 24-hour $PM_{2.5}$ Federal health standard and a proposed plan of action to reduce ground-level ozone. The primary criteria pollutants that remain in the local area include $PM_{2.5}$ and ozone.

Specific criteria for determining a project's conformity with the AQMP is defined in Section 12.3 of the SCAQMD's CEQA Air Quality Handbook. The Air Quality Handbook refers to the following criteria as a means to determine a project's conformity with the AQMP. *Consistency Criteria 1* refers to a proposed project's potential for resulting in an increase in the frequency or severity of an existing air quality violation, or its

[4] South Coast Air Quality Management District, *Final 2016 Air Quality Plan*. Adopted March 2017.

[5] Ibid.

[6] Ibid.

potential for contributing to the continuation of an existing air quality violation. *Consistency Criteria 2* refers to a proposed project's potential for exceeding the assumptions included in the AQMP or other regional growth projections relevant to the AQMP's implementation.[7]

In terms of Criteria 1, the proposed project's long-term (operational) airborne emissions will be below levels that the SCAQMD considers to be a significant impact (refer to the analysis included in the next section where the long-term stationary and mobile emissions for the proposed project are summarized in Table 2). In addition, the project's operational emissions will be well within the emissions projections identified in the most recent AQMP. As shown in Table 3-5 of the Final 2016 AQMP, the future 2031 daily operational emissions *with* the estimated population, employment, and VMT growth projections are estimated to be: 345 tons per day of VOCs; 214 tons per day of NOx; 1,188 tons per day of CO; 18 tons per day of SOx; and 65 tons per day of $PM_{2.5}$. The project's operational emissions will be well within the emissions projections estimated in the AQMP. The proposed project is consistent with the San Bernardino County General Plan and will not violate Consistency Criteria 2. Since the proposed project will not be in violation of either Consistency Criteria, the project's potential impacts are considered to be less than significant.

B. 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 federal or state ambient air quality standard?
● Less than Significant Impact.

The analysis of daily construction emissions has been prepared utilizing the California Emissions Estimator Model (CalEEMod V.2016.3.2) developed for the SCAQMD. The project's construction would include site preparation, construction, and the finishing of the project (paving, painting, and the planting of landscaping). The construction phase for the proposed project would take approximately nine (9) months to complete. The key construction phases are outlined below:

- *Site Preparation*. The project site would be readied for the construction during this phase. This phase would take approximately one month to complete and will involve the finished grading and trenching for footings and substructures. This phase will take one month to complete.

- *Construction*. The proposed new buildings would be constructed during this phase. This phase would take approximately six months to complete.

- *Paving*. This phase would involve the paving of the site. This phase would take approximately one month to complete.

- *Architectural Coatings and Finishing*. This phase will involve the painting of the buildings exteriors and the installation of landscaping. This phase will take approximately one month to complete.

As shown in Table 1, daily construction emissions will not exceed the SCAQMD significance thresholds. Therefore, the mass daily construction-related impacts associated with the proposed project would be less than significant.

[7] South Coast Air Quality Management District. *CEQA Air Quality Handbook.* April 1993.

Table 1
Estimated Daily Construction Emissions

Construction Phase	ROG	NO_2	CO	SO_2	PM_{10}	$PM_{2.5}$
Site Preparation (on-site)	1.54	18.28	10.75	0.02	0.87	0.66
Site Preparation (off-site)	0.03	0.02	0.30	--	0.09	0.02
Total Site Preparation	**1.57**	**18.30**	**11.05**	**0.02**	**0.96**	**0.68**
Grading (on-site)	1.83	20.21	9.76	0.02	3.48	2.14
Grading (off-site)	0.04	0.03	0.38	--	0.11	0.03
Total Grading	**1.87**	**20.24**	**10.14**	**0.02**	**1.41**	**2.17**
Building Construction (on-site)	2.05	16.02	14.56	0.03	0.81	0.78
Building Construction (off-site)	0.18	1.70	1.59	--	--	0.13
Total Building Construction	**2.23**	**17.72**	**16.15**	**0.03**	**0.81**	**0.91**
Paving (on-site)	1.06	10.64	11.78	0.01	0.58	0.54
Paving (off-site)	0.06	0.04	0.57	--	0.17	0.05
Total Paving	**1.12**	**10.68**	**12.35**	**0.01**	**0.75**	**0.59**
Architectural Coatings (on-site)	39.21	1.52	1.82	--	0.09	0.09
Architectural Coatings (off-site)	0.02	0.01	0.22	--	0.07	0.02
Total Architectural Coatings	**39.23**	**1.53**	**2.04**	**--**	**0.16**	**0.11**
Maximum Daily Emissions	**39.23**	**20.24**	**16.15**	**0.03**	**3.48**	**2.17**
Daily Thresholds	**75**	**100**	**550**	**150**	**150**	**55**

Source: California Air Resources Board CalEEMod [computer program].

The project's construction would be required to adhere to all SCAQMD regulations related to fugitive dust generation and other construction-related emissions. Long-term emissions refer to those air quality impacts that will occur once the proposed project has been constructed and is operational and will continue over the operational life of the project. The long-term air quality impacts associated with the proposed project include mobile emissions associated with vehicular traffic. The analysis of long-term operational impacts also used the CalEEMod computer model. As indicated in Table 2, the projected long-term emissions will also be below thresholds considered to be a significant impact.

Table 2
Estimated Operational Emissions in lbs/day

Emission Source	ROG	NO_2	CO	SO_2	PM_{10}	$PM_{2.5}$
Area-wide (lbs/day)	2.25	--	--	0.00	0.00	0.00
Energy (lbs/day)	0.09	0.88	0.74	--	0.07	0.07
Mobile (lbs/day)	1.54	0.33	0.62	0.03	1.87	0.52
Total (lbs/day)	**3.88**	**1.21**	**1.36**	**0.03**	**1.94**	**0.59**
Daily Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**

As indicated in Table 2, the proposed project would result in potential operational emissions well below the SCAQMD's thresholds established by the SCAQMD. As a result, the potential impacts are considered to be less than significant.

C. Would the project expose sensitive receptors to substantial pollutant concentrations? ● Less than Significant Impact.

Sensitive receptors refer to land uses and/or activities that are especially sensitive to poor air quality and typically include homes, schools, playgrounds, hospitals, convalescent homes, and other facilities where children or the elderly may congregate.[8] These population groups are generally more sensitive to poor air quality. The nearest sensitive receptors to the project site include residential uses are located southeast and east of the site and the Crestview Elementary School is located approximately 600 feet to the east of the site. The SCAQMD requires that CEQA air quality analyses indicate whether a proposed project will result in an exceedance of *localized significance thresholds* or LSTs. LSTs apply to short-term (construction) emissions at a fixed location, and do not include off-site or regional emissions. The approach used in the analysis of the proposed project utilized a number of screening tables that identified maximum allowable emissions (in pounds per day) at a specified distance to any receptor.

The pollutants that are the focus of the LST analysis include the conversion of NO_x to NO_2; carbon monoxide (CO) emissions from construction; PM_{10} emissions from construction; and $PM_{2.5}$ emissions from construction. The use of the "look-up tables" is typically used for projects proposed on less than five acres of land area. The project site consists of 2.32 acres. Therefore, for the purposes of the LST analysis, the thresholds of significance for five acre sites were used. The average distance to the nearest sensitive receptors was assumed to be 100 meters (approximately 300 feet). The project site is located in Source Receptor Area (SRA)#33 (Southwest San Bernardino County). The proposed project's LST emissions are shown in Table 3. As indicated in Table 3, the emissions generated by the construction of the proposed project will not exceed the LSTs identified in Table 3.

Table 3
Local Significance Thresholds Exceedance SRA 33 for 5 Acre Site

Emissions	Proposed Project	Type	Allowable Emissions Threshold (lbs/day) and a Specified Distance from Receptor (in meters)				
			25	50	100	200	500
NO_x	20.24	Construction	270	303	**378**	486	778
CO	16.15	Construction	2,193	2,978	**5,188**	9,611	29,410
PM_{10}	3.48*	Construction	4	12	**20**	34	78
$PM_{2.5}$	2.18*	Construction	2	3	**5**	11	41

Source: CalEEMod Version 2016.3.2.
*= Note: These figures take into account the water of the site up to three times per day, which is a standard condition required by the SCAQMD.

An analysis of mobile source diesel particulate matter (DPM) emissions was performed for idling trucks, trucks travelling to the project site, and for the operation of construction equipment due to the presence of sensitive receptors located immediately east and south of the project site. The 2017 EMFAC emissions factors for LHD2 vehicles, or Light-Heavy-Duty trucks weighing no more than 14,000 pounds, were utilized in order to perform the analysis for construction trucks. Meanwhile, the emission factors for the individual construction equipment were derived from the SCAQMD. Construction vehicles will enter the project site from either Jurupa Avenue or Cedar Avenue. The model assumed construction vehicles would travel to the

[8] South Coast Air Quality Management District. *CEQA Air Quality Handbook, Appendix 9*. As amended 2017.

site using Cedar Avenue at a speed of 45 miles per hour. According to the CalEEMod, there will be no more than 64 workers and vendors on-site at a time. Assuming five workers per truck, there will be the potential for up to 40 trucks carrying passengers. Table 4 shown below depicts the estimated mobile source emissions during construction from the contractor's vehicles. As shown in the table, the project's construction vehicles will result in negligible emissions.

Table 4
Mobile Source Emissions from Construction Vehicles

Pollutants	Emissions Factors (grams/mile)	Distance in miles (round trip)	Number of Vehicles	Emissions
PM10 Exhaust at Idle (grams/vehicle/day)	0.27616843	--	64	17.67 grams per day, or 0.03 pounds per day
PM10 Exhaust at 45 mph (grams/mile)	0.001928096	1.30	64	0.16 grams per day, or 0.0003 pounds per day
PM2.5 Exhaust at Idle (grams/vehicle/day)	0.02642215	--	64	1.69 grams per day, or 0.003 pounds per day
PM2.5 Exhaust at 45 mph (grams/mile)	0.001844688	1.30	64	0.15 grams per day, or 0.0003 pounds per day

Source: 2017 EMFAC Factors

Table 5 depicts the project's mobile source DPM emissions during the site preparation phase. The number and pieces of equipment that will be used during the site preparation phase was taken from the CalEEMod worksheets that were prepared for this project. As shown in the table, the project's site preparation phase will result in negligible emissions.

Table 5
Mobile Source Emissions During Site Preparation

Equipment	Number of Vehicles	Pollutants	Emissions Factors (grams/hour)	Number of Hours	Distance in miles	Emissions
Tractors	1	PM Exhaust during Operations (pounds/hour)	0.016	8	--	0.128 pounds per day
Loaders	2	PM Exhaust during Operations (pounds/hour)	0.016	8	--	0.256 pounds per day
Backhoes	2	PM Exhaust during Operations (pounds/hour)	0.016	8	--	0.256 pounds per day
Rubber Tired Dozers	3	PM Exhaust during Operations (pounds/hour)	0.0559	8	--	1.39 pounds per day

Table 6 depicts the project's mobile source DPM emissions during the construction phase. The number and pieces of equipment that will be used during the construction phase was taken from the CalEEMod worksheets that were prepared for this project. As shown in the table, the construction phase will result in negligible emissions.

Table 6
Mobile Source Emissions During Construction

Equipment	Number of Vehicles	Pollutants	Emissions Factors (grams/hour)	Number of Hours	Distance in miles	Emissions
Crane	1	PM Exhaust during Operations (pounds/hour)	0.0190	8	--	0.152 pounds per day
Forklift	3	PM Exhaust during Operations (pounds/hour)	0.008	8	--	0.064 pounds per day
Tractors	1	PM Exhaust during Operations (pounds/hour)	0.016	8	--	0.128 pounds per day
Loaders	1	PM Exhaust during Operations (pounds/hour)	0.016	8	--	0.128 pounds per day
Backhoes	1	PM Exhaust during Operations (pounds/hour)	0.016	8	--	0.128 pounds per day

Source: 2017 EMFAC Factors

Table 7 depicts the project's mobile source DPM emissions during the paving phase. The number and pieces of equipment that will be used during the paving phase was taken from the CalEEMod worksheets that were prepared for this project. As shown in the table, the grading phase will result in negligible emissions.

Table 7
Mobile Source Emissions During Paving

Equipment	Number of Vehicles	Pollutants	Emissions Factors (grams/hour)	Number of Hours	Distance in miles	Emissions
Pavers	2	PM Exhaust during Operations (pounds/hour)	0.046	8	--	0.736 pounds per day
Rollers	2	PM Exhaust during Operations (pounds/hour)	0.014	8	--	0.224 pounds per day
Paving Equipment	2	PM Exhaust during Operations (pounds/hour)	0.036	8	--	0.576 pounds per day

Source: 2017 EMFAC Factors

Most vehicles generate carbon monoxide (CO) as part of the tail-pipe emissions and high concentrations of CO along busy roadways and congested intersections are a concern. The areas surrounding the most congested intersections are often found to contain high levels of CO that exceed applicable standards and are referred to as *hot-spots*. Three variables influence the creation of a CO hot-spot: traffic volumes, traffic congestion, and the background CO concentrations for the source receptor area. Typically, a CO hot-spot may occur near a street intersection that is experiencing severe congestion (a LOS E or LOS F) where idling

vehicles result in ground level concentrations of carbon monoxide. However, within the last decade, decreasing background levels of pollutant concentrations and more effective vehicle emission controls have significantly reduced the potential for the creation of hot-spots. The SCAQMD stated in its CEQA Handbook that a CO hot-spot would not likely develop at an intersection operating at LOS C or better. Since the Handbook was written, there have been new CO emissions controls added to vehicles and reformulated fuels are now sold in the SCAB. These new automobile emissions controls, along with the reformulated fuels, have resulted in a lowering of both ambient CO concentrations and vehicle emissions. As a result, the potential impacts are considered to be less than significant.

D. Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people? ● Less than Significant Impact.

The SCAQMD has identified land uses that are typically associated with odor complaints. These uses include activities involving livestock, rendering facilities, food processing plants, chemical plants, composting activities, refineries, landfills, and businesses involved in fiberglass molding.[9] Given the nature of the proposed use, no impacts related to odors are anticipated with the proposed project. In addition, the project site is not located in the vicinity of any odor generating use.

The emissions from the equipment that will be used on-site during the construction phase will be minor. Idling from construction vehicles and equipment will be restricted to five minutes or less based on standard SCAQMD protocols. Therefore, odors generated by diesel powered equipment will be less than significant. As a result, the potential impacts are anticipated to be less than significant.

3.3 RECOMMENDED MITIGATION

As indicated previously, the proposed project will not result in any significant construction and operational air quality impacts and no mitigation measures are required.

4. GREENHOUSE GAS EMISSIONS ANALYSIS

4.1 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project may be deemed to have a significant environmental impact on air quality, if it results in any of the following:

- The generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and,

- The potential for conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases.

[9] South Coast Air Quality Management District. *CEQA Air Quality Handbook,* As amended 2017.

4.2 ENVIRONMENTAL ANALYSIS

A. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? W *Less Than Significant Impact.*

The State of California requires CEQA documents to include an evaluation of greenhouse gas (GHG) emissions, or gases that trap heat in the atmosphere. GHG are emitted by both natural processes and human activities. Examples of GHG that are produced both by natural and industrial processes include carbon dioxide (CO_2), methane (CH_4), Nitrous Oxide (N_2O), and Chlorofluorocarbons (CFC):

- *Carbon Dioxide (CO2):* Carbon dioxide enters the atmosphere through the combustion of fossil fuels such as coal, natural gas, and oil, solid waste, trees and organic biological materials, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

- *Methane (CH_4):* Methane is emitted during the production and transport of coal, natural gas, and oil. Locally, methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.

- *Nitrous Oxide (N_2O):* Nitrous oxide is emitted during agricultural and industrial activities, the combustion of fossil fuels and solid waste, as well as during treatment of wastewater.

- *Fluorinated carbons and gasses:* Hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting gasses.

The accumulation of GHG in the atmosphere regulates the earth's temperature. Without these natural GHG, the Earth's surface would be about 61°F cooler.[10] However, emissions from fossil fuel combustion have elevated the concentrations of GHG in the atmosphere to above natural levels.

The SCAQMD has established multiple draft thresholds of significance. These thresholds include 1,400 metric tons of CO_2E ($MTCO_2E$) per year for commercial projects, 3,500 $MTCO_2E$ per year for residential projects, 3,000 $MTCO_2E$ per year for mixed-use projects, and 7,000 $MTCO_2E$ per year for industrial projects. The SCAQMD currently has an established threshold of 10,000 $MTCO_2E$ per year for industrial development (according to the SCAQMD, this threshold may be used for all type of development if the lead agency does not have a threshold identified).[11] The 3,500 MTCO2E per year threshold was used in an effort to be conservative.

Table 9 summarizes annual greenhouse gas (CO_2E) emissions from the proposed project. Carbon dioxide equivalent, or CO_2E, is a term that is used for describing different greenhouses gases in a common and collective unit. As indicated in Table 8, the CO_2E total operational GHG emissions for the project are 3,965 $MTCO_2E$ per year. This figure would actually be reduced by 50% to 3,118 $MTCO_2E$ when accounting for shared trips and pass-by traffic. The total construction emissions would be 3,106 $MTCO_2E$ per year. When amortized over a 30-year period, these emissions decrease to 103 $MTCO_2E$ per year. These amortized construction

[10] California, State of. OPR Technical Advisory – CEQA and Climate Change: Addressing Climate Change through the California Environmental Quality Act (CEQA) Review. June 19, 2008.

[11] Phone Call with Ms. Lijin Sun of the SCAQMD.

emissions were added to the project's operational emissions to calculate the project's true GHG emissions. As shown in the table, the project's total operational emissions would be 2,086 $MTCO_2E$ per year, which is still below the thresholds identified for residential land uses.

Table 8
Greenhouse Gas Emissions Inventory

Source	GHG Emissions (tons/year)			
	CO_2	CH_4	N_2O	CO_2E
Long-Term – Area Emissions	--	--	--	--
Long-Term - Energy Emissions	1,068.31	0.02	0.02	1,064.60
Long-Term - Mobile Emissions	2,896.72	0.19	0.00	2,901.45
Long-Term – Waste Emissions	--	--	--	--
Long-Term – Water Emissions	--	--	--	--
Long-Term - Total Emissions	**3,965.03**	**0.21**	**0.02**	**3,966.05**
Actual Emissions w/Passby & Shared Trips	**1,982.52**	**0.11**	**0.01**	**1,983.03**
Total Construction Emissions	**3,106.45**	**0.77**	**--**	**3,118.64**
Construction Emissions Amortized Over 30 Years				**103 $MTCO_2E$**
Total Operational Emissions with Amortized Construction Emissions				**2,086 $MTCO_2E$**
Significance Threshold				**3,500 $MTCO_2E$**

The GHG emissions estimates reflect what a residential development of the same location and description would generate once fully operational. The type of activities that may be undertaken once the project is operational have been predicted and accounted for in the model for the selected land use type. It is important to note that the project is an "infill" development, which is seen as an important strategy in combating the release of GHG emissions. Infill development provides a regional benefit in terms of a reduction in Vehicle Miles Traveled (VMT) since the project is consistent with the regional and State sustainable growth objectives identified in the State's Strategic Growth Council (SGC).[12]

Infill development reduces VMT by recycling existing undeveloped or underutilized properties located in established urban areas. When development is located in a more rural setting, such as further east in the inland empire or desert areas, employees, patrons, visitors, and residents may have to travel farther since rural development is often located a significant distance from employment, entertainment, and population centers. Consequently, this distance is reduced when development is located in urban areas since employment, entertainment, and population centers tend to be set in more established communities. As a result, the potential impacts are considered to be less than significant.

[12] California Strategic Growth Council. http://www.sgc.ca.gov/Initiatives/infill-development.html. Promoting and enabling sustainable infill development is a principal objective of the SGC because of its consistency with the State Planning Priorities and because infill furthers many of the goals of all of the Council's member agencies.

B. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases? ● Less than Significant Impact.

AB-32 requires the reduction of GHG emissions to 1990 levels, which would require a minimum 28% in "business as usual" GHG emissions for the entire State. Additionally, Governor Edmund G. Brown signed into law Executive Order (E.O.) B-30-15 on April 29, 2015, the Country's most ambitious policy for reducing Greenhouse Gas Emissions. Executive Order B-30-15 calls for a 40% reduction in greenhouse gas emissions below 1990 levels by 2030.[13] The proposed project will not involve or require any variance from an adopted plan, policy, or regulation governing GHG emissions. The emissions generated by the proposed project will be less than the thresholds of significance established for CO_2 (refer to Table 9).

The proposed project will be in compliance with the City's Building Code requirements and with Part 6 and Part 11 of Title 24 of the California Code of Regulations. On January 12, 2010, the State Building Standards Commission adopted updates to the California Green Building Standards Code (Code) which became effective on January 1, 2011. The California Code of Regulations (CCR) Title 24, Part 11: California Green Building Standards (Title 24) became effective to aid efforts to reduce GHG emissions associated with energy consumption. Title 24 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. The 2016 version of the standards became effective as of January 1, 2017. The 2016 version addresses additional items such as clean air vehicles, increased requirements for electric vehicles charging infrastructure, organic waste, and water efficiency and conservation. The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as State law provides methods for local enhancements. Since the project will be in conformance with Part 6 and Part 11 regulations, the potential impacts are considered to be less than significant.

4.3 MITIGATION MEASURES

As indicated previously, the proposed project will not result in any significant impacts with regards to the emission of GHG and no mitigation is required.

5. SUMMARY AND CONCLUSIONS

The following conclusions may be made based on the results of this air quality and greenhouse gas study.

- Construction emissions will be below the thresholds of significance for the six identified criteria pollutants.

- Adherence to SCAQMD Rule 403 will ensure fugitive dust emissions remain at levels that are less than significant.

- Operational emissions are projected to be below the thresholds of significance for the six identified criteria pollutants.

[13] Office of Governor Edmund G. Brown Jr. *New California Goal Aims to Reduce Emissions 40 Percent Below 1990 Levels by 2030.* http://gov.ca.gov/news.php?id=18938.

- The project's construction emissions will not exceed the Local Significance Thresholds (LST) for the four criteria pollutants. In addition, adherence to SCAQMD Rule 403 will further minimize fugitive dust emissions.

- The analysis of the mobile sourced diesel particulate matter emissions generated by construction vehicles and equipment will not be significant enough to result in a cancer risk of 10 in 1 million.

- The project's annual greenhouse gas emissions will be below the SCAQMD thresholds of significance for mixed use projects.

- Recommendations were made to reduce construction noise.

- Adherence to the most recent Title 24 requirements will reduce the exposure of future residents to excessive noise levels.

- The project will not generate operational noise that would impact the mobile home park to the west.

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Bloomington Air Quality Study

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	8.00	Pump	2.32	101,059.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - N/A

Construction Phase - N/A

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Bloomington Air Quality Study - South Coast AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	10.00	24.00
tblConstructionPhase	NumDays	220.00	131.00
tblConstructionPhase	NumDays	6.00	12.00
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	NumDays	3.00	11.00
tblConstructionPhase	PhaseEndDate	12/15/2021	10/10/2021
tblConstructionPhase	PhaseEndDate	11/17/2021	8/4/2021
tblConstructionPhase	PhaseEndDate	1/13/2021	2/2/2021
tblConstructionPhase	PhaseEndDate	12/1/2021	9/6/2021
tblConstructionPhase	PhaseEndDate	1/5/2021	1/15/2021
tblConstructionPhase	PhaseStartDate	12/2/2021	9/7/2021
tblConstructionPhase	PhaseStartDate	1/14/2021	2/3/2021
tblConstructionPhase	PhaseStartDate	1/6/2021	1/16/2021
tblConstructionPhase	PhaseStartDate	11/18/2021	8/5/2021
tblGrading	AcresOfGrading	6.00	3.00
tblGrading	AcresOfGrading	16.50	4.50
tblLandUse	LandUseSquareFeet	1,129.40	101,059.00
tblLandUse	LotAcreage	0.03	2.32

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	39.2785	20.2409	16.1532	0.0329	6.3990	0.9166	7.3156	3.3685	0.8433	4.2117	0.0000	3,106.4500	3,106.4500	0.7698	0.0000	3,118.6466
Maximum	**39.2785**	**20.2409**	**16.1532**	**0.0329**	**6.3990**	**0.9166**	**7.3156**	**3.3685**	**0.8433**	**4.2117**	**0.0000**	**3,106.4500**	**3,106.4500**	**0.7698**	**0.0000**	**3,118.6466**

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	39.2785	20.2409	16.1532	0.0329	2.5638	0.9166	3.4804	1.3318	0.8433	2.1750	0.0000	3,106.4500	3,106.4500	0.7698	0.0000	3,118.6466
Maximum	**39.2785**	**20.2409**	**16.1532**	**0.0329**	**2.5638**	**0.9166**	**3.4804**	**1.3318**	**0.8433**	**2.1750**	**0.0000**	**3,106.4500**	**3,106.4500**	**0.7698**	**0.0000**	**3,118.6466**

	ROG	NOx	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**	**59.93**	**0.00**	**52.43**	**60.46**	**0.00**	**48.36**	**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	2.2577	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8700e-003
Energy	0.0970	0.8819	0.7408	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,058.3100	1,058.3100	0.0203	0.0194	1,064.5991
Mobile	1.5417	6.6322	9.6223	0.0283	1.8546	0.0235	1.8781	0.4962	0.0219	0.5181		2,896.7238	2,896.7238	0.1892		2,901.4539
Total	**3.8964**	**7.5142**	**10.3640**	**0.0336**	**1.8546**	**0.0905**	**1.9451**	**0.4962**	**0.0889**	**0.5851**		**3,955.0356**	**3,955.0356**	**0.2095**	**0.0194**	**3,966.0549**

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	2.2577	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8700e-003
Energy	0.0970	0.8819	0.7408	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,058.3100	1,058.3100	0.0203	0.0194	1,064.5991
Mobile	1.5417	6.6322	9.6223	0.0283	1.8546	0.0235	1.8781	0.4962	0.0219	0.5181		2,896.7238	2,896.7238	0.1892		2,901.4539
Total	**3.8964**	**7.5142**	**10.3640**	**0.0336**	**1.8546**	**0.0905**	**1.9451**	**0.4962**	**0.0889**	**0.5851**		**3,955.0356**	**3,955.0356**	**0.2095**	**0.0194**	**3,966.0549**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	Site Preparation	Site Preparation	1/1/2021	1/15/2021	5	11	
2	Grading	Grading	1/16/2021	2/2/2021	5	12	
3	Building Construction	Building Construction	2/3/2021	8/4/2021	5	131	
4	Paving	Paving	8/5/2021	9/6/2021	5	23	
5	Architectural Coating	Architectural Coating	9/7/2021	10/10/2021	5	24	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 151,589; Non-Residential Outdoor: 50,530; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Bloomington Air Quality Study - South Coast AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Paving Equipment	1	8.00	132	0.36
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	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
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	32.00	17.00	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	6.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 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					0.4338	0.0000	0.4338	0.0468	0.0000	0.0468			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**0.4338**	**0.7019**	**1.1357**	**0.0468**	**0.6457**	**0.6926**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

3.2 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	0.0338	0.0219	0.3014	8.9000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.1000e-004	0.0243		88.5923	88.5923	2.3800e-003		88.6518
Total	**0.0338**	**0.0219**	**0.3014**	**8.9000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.1000e-004**	**0.0243**		**88.5923**	**88.5923**	**2.3800e-003**		**88.6518**

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					0.1692	0.0000	0.1692	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**0.1692**	**0.7019**	**0.8711**	**0.0183**	**0.6457**	**0.6640**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

3.2 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	0.0338	0.0219	0.3014	8.9000e-004	0.0894	6.6000e-004	0.0901	0.0237	6.1000e-004	0.0243		88.5923	88.5923	2.3800e-003		88.6518
Total	**0.0338**	**0.0219**	**0.3014**	**8.9000e-004**	**0.0894**	**6.6000e-004**	**0.0901**	**0.0237**	**6.1000e-004**	**0.0243**		**88.5923**	**88.5923**	**2.3800e-003**		**88.6518**

3.3 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					6.2872	0.0000	6.2872	3.3389	0.0000	3.3389			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.2872**	**0.9158**	**7.2030**	**3.3389**	**0.8425**	**4.1813**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

3.3 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	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	**0.0422**	**0.0274**	**0.3767**	**1.1100e-003**	**0.1118**	**8.2000e-004**	**0.1126**	**0.0296**	**7.6000e-004**	**0.0304**		**110.7403**	**110.7403**	**2.9800e-003**		**110.8148**

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					2.4520	0.0000	2.4520	1.3022	0.0000	1.3022			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**2.4520**	**0.9158**	**3.3678**	**1.3022**	**0.8425**	**2.1446**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

3.3 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	0.0422	0.0274	0.3767	1.1100e-003	0.1118	8.2000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.7403	110.7403	2.9800e-003		110.8148
Total	**0.0422**	**0.0274**	**0.3767**	**1.1100e-003**	**0.1118**	**8.2000e-004**	**0.1126**	**0.0296**	**7.6000e-004**	**0.0304**		**110.7403**	**110.7403**	**2.9800e-003**		**110.8148**

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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0473	1.6214	0.3848	4.3400e-003	0.1088	3.2700e-003	0.1121	0.0313	3.1200e-003	0.0345		463.1454	463.1454	0.0280		463.8458
Worker	0.1351	0.0876	1.2055	3.5600e-003	0.3577	2.6300e-003	0.3603	0.0949	2.4200e-003	0.0973		354.3691	354.3691	9.5300e-003		354.6073
Total	**0.1824**	**1.7090**	**1.5903**	**7.9000e-003**	**0.4665**	**5.9000e-003**	**0.4724**	**0.1262**	**5.5400e-003**	**0.1317**		**817.5145**	**817.5145**	**0.0376**		**818.4531**

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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0473	1.6214	0.3848	4.3400e-003	0.1088	3.2700e-003	0.1121	0.0313	3.1200e-003	0.0345		463.1454	463.1454	0.0280		463.8458
Worker	0.1351	0.0876	1.2055	3.5600e-003	0.3577	2.6300e-003	0.3603	0.0949	2.4200e-003	0.0973		354.3691	354.3691	9.5300e-003		354.6073
Total	**0.1824**	**1.7090**	**1.5903**	**7.9000e-003**	**0.4665**	**5.9000e-003**	**0.4724**	**0.1262**	**5.5400e-003**	**0.1317**		**817.5145**	**817.5145**	**0.0376**		**818.4531**

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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0633**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

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	0.0633	0.0411	0.5651	1.6700e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456		166.1105	166.1105	4.4700e-003		166.2222
Total	**0.0633**	**0.0411**	**0.5651**	**1.6700e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**166.1105**	**166.1105**	**4.4700e-003**		**166.2222**

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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0633**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

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	0.0633	0.0411	0.5651	1.6700e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456		166.1105	166.1105	4.4700e-003		166.2222
Total	**0.0633**	**0.0411**	**0.5651**	**1.6700e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**		**166.1105**	**166.1105**	**4.4700e-003**		**166.2222**

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	39.0342					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	**39.2531**	**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	0.0253	0.0164	0.2260	6.7000e-004	0.0671	4.9000e-004	0.0676	0.0178	4.5000e-004	0.0182		66.4442	66.4442	1.7900e-003		66.4889
Total	**0.0253**	**0.0164**	**0.2260**	**6.7000e-004**	**0.0671**	**4.9000e-004**	**0.0676**	**0.0178**	**4.5000e-004**	**0.0182**		**66.4442**	**66.4442**	**1.7900e-003**		**66.4889**

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	39.0342					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	**39.2531**	**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**

3.6 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	0.0253	0.0164	0.2260	6.7000e-004	0.0671	4.9000e-004	0.0676	0.0178	4.5000e-004	0.0182		66.4442	66.4442	1.7900e-003		66.4889
Total	**0.0253**	**0.0164**	**0.2260**	**6.7000e-004**	**0.0671**	**4.9000e-004**	**0.0676**	**0.0178**	**4.5000e-004**	**0.0182**		**66.4442**	**66.4442**	**1.7900e-003**		**66.4889**

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	1.5417	6.6322	9.6223	0.0283	1.8546	0.0235	1.8781	0.4962	0.0219	0.5181		2,896.7238	2,896.7238	0.1892		2,901.4539
Unmitigated	1.5417	6.6322	9.6223	0.0283	1.8546	0.0235	1.8781	0.4962	0.0219	0.5181		2,896.7238	2,896.7238	0.1892		2,901.4539

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	1,348.48	1,348.48	1348.48	872,182	872,182
Total	1,348.48	1,348.48	1,348.48	872,182	872,182

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
Gasoline/Service Station	16.60	8.40	6.90	2.00	79.00	19.00	14	27	59

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Gasoline/Service Station	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0970	0.8819	0.7408	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,058.3100	1,058.3100	0.0203	0.0194	1,064.5991
NaturalGas Unmitigated	0.0970	0.8819	0.7408	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,058.3100	1,058.3100	0.0203	0.0194	1,064.5991

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					
Gasoline/Service Station	8995.64	0.0970	0.8819	0.7408	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,058.3100	1,058.3100	0.0203	0.0194	1,064.5991
Total		**0.0970**	**0.8819**	**0.7408**	**5.2900e-003**		**0.0670**	**0.0670**		**0.0670**	**0.0670**		**1,058.3100**	**1,058.3100**	**0.0203**	**0.0194**	**1,064.5991**

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					
Gasoline/Service Station	8.99564	0.0970	0.8819	0.7408	5.2900e-003		0.0670	0.0670		0.0670	0.0670		1,058.3100	1,058.3100	0.0203	0.0194	1,064.5991
Total		**0.0970**	**0.8819**	**0.7408**	**5.2900e-003**		**0.0670**	**0.0670**		**0.0670**	**0.0670**		**1,058.3100**	**1,058.3100**	**0.0203**	**0.0194**	**1,064.5991**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	2.2577	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8700e-003
Unmitigated	2.2577	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8700e-003

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	0.2567					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8700e-003
Total	**2.2577**	**1.0000e-005**	**8.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.7500e-003**	**1.7500e-003**	**0.0000**		**1.8700e-003**

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	0.2567					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8700e-003
Total	2.2577	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.7500e-003	1.7500e-003	0.0000		1.8700e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

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