
CITY OF RIO VISTA

Public Draft Initial Study – Mitigated Negative Declaration Rio Vista Manufacturing

August 2020



Kimley»Horn

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Rio Vista Manufacturing Project

Public Draft:

Initial Study – Mitigated Negative Declaration

City of Rio Vista
Planning Department
One Main Street
Rio Vista, CA 95714
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August 2020

Prepared by:

Kimley-Horn

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- Appendix A – Air Quality and GHG Data
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REPORT ORGANIZATION:

This document has been organized into the following sections:

Section 1.0 – Introduction and Purpose. This section provides an introduction and overview describing the conclusions of the Initial Study.

Section 2.0 – Project Description. This section identifies key project characteristics and includes a list of anticipated discretionary actions.

Section 3.0 – Initial Study Checklist. The Environmental Checklist Form provides an overview of the potential impacts that may or may not result from project implementation.

Section 4.0 – Environmental Evaluation. This section contains an analysis of environmental impacts identified in the environmental checklist.

Section 5.0 – References. The section identifies resources used to prepare the Initial Study.

1.0 INTRODUCTION & PURPOSE

1.1 Purpose and Scope of the Initial Study

This Initial Study (IS) was prepared pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, Section 21000, et seq and written in accordance with the requirements of contained therein. This document was written for the Rio Vista Manufacturing Project (proposed project) for the purpose of determining whether the proposed project may have a significant effect on the environment. A copy of this study is on file at the City of Rio Vista, Community Development Department, One Main Street, Rio Vista, CA 94571.

1.2 Lead Agency

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b) (1), “the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose.” Based on the criteria above, the City of Rio Vista (City) is the lead agency for the proposed project.

1.3 Cannabis Related Projects and Licensing/CEQA Review

The California Department of Food and Agriculture (CDFA), California Bureau of Cannabis Control (BCC), and California of Public Health (CDPH) have jurisdiction over the issuance of various licenses needed to legally cultivate, propagate, test, distribute and process commercial cannabis in California. Depending on the nature of a cannabis related project, the specific project elements, and the level of impacts CDFA may take on the role of the Lead Agency. In the instance of the proposed project, impacts to all resource areas were found to have No Impact, a Less than Significant Impact, or be Less than Significant with Mitigation.

Because of this, the City has taken the role of Lead Agency and therefore, circulated this document for review and approval. It should be noted that this document is available to CDFA, BCC, and CDPH for review and comment. In addition, as applicable, the project applicant will be required to show current compliance with all requirements set forth by these agencies prior to project initiation and throughout the operational period of the proposed project.

The CDFA certified a Programmatic Environmental Impact Report (PEIR) in November 2017, that document analyzed the potential environmental impacts of cannabis licensing activities on a state-wide basis pursuant to the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA). CalCannabis encourages local agencies to refer to the PEIR and specifically to Appendix J, which provided a CEQA Tiering Strategy as a guidance tool for local agencies in the preparation of CEQA documents. The PEIR concluded that environmental impacts on a state-wide basis would be less than significant based on CEQA thresholds, with the exception of potentially significant impacts to cultural and tribal resources. The tiering checklist has been reviewed in the preparation of this environmental document. At the time of the writing of this document, the PEIR was not available from CDFA because it was being updated for compliance with the Americans with Disabilities Act (ACT).¹

In light of the above and in terms of analysis approach, the proposed project is analyzed based on other guidance provided by the BCC, CDFA, and CDPF including but not limited to CCR Title 16 Division 42. Bureau of Cannabis Control, CCR Title 3. Food and Agricultural Division 8. Cannabis Cultivation Chapter 1. Cannabis Cultivation Program, and CCR Title 17 Division 1 Chapter 13, Manufactured Cannabis Safety Subchapter 1. General Provisions and Definitions. All applicable regulations were weighed against the needed land entitlements and construction of the proposed industrial scale building(s) designed for commercial cannabis production as disclosed in this IS/MND.

1.4 Environmental Analysis

This document has been prepared using the CEQA IS Checklist as approved by the City. The conclusions herein are based on CEQA standards, professional judgement, field review and available public documents. This IS contains and constitutes substantial evidence supporting the conclusion that preparation of an EIR is not required prior to approval of the proposed project by the City and provides the required documentation under CEQA.

1.5 Initial Study Public Review Process

CEQA Statutes and Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.), sets forth the rules, regulations, and procedures for the implementation of CEQA. The requirements and steps of preparation and adoption of a Negative Declaration (ND) or Mitigated Negative Declaration (MND), such as is needed for the proposed project are discussed in § 15070 through 15075 of the State CEQA Guidelines. The IS was prepared to provide an initial evaluation of the potential impacts of the proposed project. Based on that evaluation, it was determined that the proposed project would result in No Impact, a Less than Significant Impact, or the Impact would be Mitigated to Less than Significant.

After this was determined, a Notice of Intent to Adopt the MND based on State CEQA Guidelines § 15072, was prepared and submitted to the State Clearinghouse for filing. The document was made available for

¹ Correspondence with CDFA, May 12, 2020.

a 30-day public review period from August 27, 2020 to September 28, 2020, during which time the public, interested parties, stakeholders, and any state or local agency could provide comment on the document. The Initial Study/Mitigated Negative Declaration may be viewed at the City of Rio Vista website at the following link: <https://www.riovistacity.com/ceqa-reports/>

Written comments on this Initial Study/Mitigated Negative Declaration should reference the “Rio Vista Manufacturing project,” and be addressed to the Lead agency at the following name and address:

City of Rio Vista Planning Department
Attn: Robert Hickey - City Manager
One Main Street
Rio Vista, CA 95945

or, rhipkey@ci.rio-vista.ca.us

The City of Rio Vista (City) as the Lead Agency for this project, will consider comments received and in accordance with (State CEQA Guidelines § 15074(b)), decide whether to adopt the MND prior to taking action to approve the project. If the MND is adopted and the proposed project is approved, the also will adopt a mitigation monitoring or reporting program (MMRP), which details the mitigation measures, timing of implementation, and responsible party for implementation and verification it was implemented.

1.6 Summary of Findings

The IS identified potentially significant effects on the environment. However, the proposed project includes mitigation measures (see mitigation measures below, which avoid or mitigate the effects) to a point where no significant effects would occur. There is no substantial evidence that the project may have a significant effect on the environment. The following reasons support these findings:

1. The proposal is a logical component of the existing land use pattern of this area.
2. Identified adverse impacts are proposed to be mitigated by construction best practices, pre-construction surveys and standard conditions.
3. The proposed project is consistent with the adopted goals, policies and land uses of the City of Rio Vista General Plan and Municipal Code.
4. The proposed project is consistent with the reuse and redevelopment plan for the former City of Rio Vista Municipal Airport and the City’s Cannabis Ordinance.
5. With the application of the following mitigation measures, the proposed project will not have any significant impacts on the environment:

Mitigation Measures

Air Quality

MM AQ-1: Construction Dust Mitigation. The applicant shall implement the following best practices during construction:

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Haul trucks shall maintain at least 2 feet of free board.
- Cover all trucks hauling dirt, sand or loose materials.
- Apply non-toxic binders (e.g. latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area.
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas soon as possible.
- Cover inactive storage piles.
- Sweep access road if visible soil material is carried out from the construction site.
- Treat accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips or mulch.
- Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel.

MM AQ-2: Prohibition of Open Burning of Cannabis Material. The applicant and individual license holders shall be prohibited from open burning of cannabis materials as part of project operations.

Biological Resources

MM BIO- 1: If construction activities are planned to begin after March 1, a preconstruction breeding survey for Swainson's hawks will be conducted throughout areas of suitable nesting habitat within 0.25 miles of the project site. If a Swainson's hawk nest is observed within 0.25 mile of planned construction activities, CDFW will be contacted to determine whether project-related activities are likely to impact the nesting pair and whether any avoidance and minimization measures must be established to avoid impacts.

Cultural Resources

MM CUL- 1: During ground disturbing activities, if any archeological, paleontological or tribal resources (e.g., evidence of past human habitation or fossils) are found, the project applicant and/or its contractor shall cease all work within 50 feet of the discovery and notify the City of Rio Vista Community Development Department, Planning Division immediately. The project applicant and/or its contractor shall retain a qualified archaeologist, paleontologist and Native American representative to evaluate the finds and recommend appropriate resource protection plan for the inadvertently discovered resource(s). The City and the applicant shall consider the recommendations and agree on implementation of the measure(s) that are feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, or other appropriate measures. (Health and Safety Code Section 7050.5).

MM CUL- 2: If human remains either informally interred or associated with a burial (i.e. grave goods) are discovered during construction, the project applicant and/or its contractor shall cease all work within 50 feet of the find and notify the City of Rio Vista Community Development Department, Planning Division and the County Coroner. Notifications shall occur immediately and in according with California Health and Safety Code Section 7050.5. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission and shall follow the procedures outlined in CEQA Guidelines

Section 15064.5(d) and (e) regarding treatment and disposition of recovered cultural items. The Commission will designate a Most Likely Descendant (MLD) who will be authorized to provide recommendations for management of the Native American human remains and any associated materials or objects (Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5).

Geology and Soils

MM GEO-1: If any paleontological resources are encountered during ground-disturbance activities, all work within 25 feet of the find shall halt until a qualified paleontologist is able to evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the local or regional Natural History Museum or other appropriate facility regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance will not be required. If the resources are significant, they shall be avoided or recovered such that potential damaging effects are mitigated. Construction in that area shall not resume until approval of the qualified paleontologist and City are given. If the fossil is recovered the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

Hydrology and Water Quality

MM HYD-1: Construction Water Quality Plan. Prior to issuance of any grading permit, the applicant shall submit to the satisfaction of the City Community Development Department, a Storm Water Pollution Prevention Plan (SWPPP) that satisfies the requirements of the National Pollutant Discharge Elimination System (NPDES) and State General Permit for construction. The SWPPP shall incorporate Best Management Practices (BMPs) to control runoff and sedimentation in accordance with all CVRWQCB as well as City requirements. Recommended BMPs for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

1.7 Initial Study Public Review Process

As required by Public Resources Code Section 21081.6 (a)(1), a mitigation monitoring and reporting program has been prepared for the project in order to monitor the implementation of the mitigation measures that have been adopted for the project. Any long-term monitoring of mitigation measures imposed on the overall development will be implemented through the Mitigation Monitoring and Reporting Program.

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Location and Setting

Project Location

The Rio Vista Manufacturing Project (proposed project) is located at 10 Poppy House Road, in the City of Rio Vista, County of Solano, in the State of California. The project site is approximately 1.24 acres is sited on Assessor parcel number (0178-230-012) and would occur within the City of Rio Vista in Solano County, California. *Figure 1- Regional Location Map*, shows the project site within the City and region in relation to surrounding cities, *Figure 2 – Local Vicinity Map*, shows the project site as well as surrounding land uses; *Figure 3 - Aerial Site View*, shows the project site on a close up aerial and surrounding roadways, *Figure 4 – Aerial Photograph 1993*, and *Figure 5 –Aerial Photograph 2011*, show the past setting of the project site, and *Figure 6 – Project Site Plan*, provides a diagram of the proposed improvements in this setting.

Project Setting

The proposed project would be located within the boundaries of the former City of Rio Municipal Airport. Much of the former buildings and runways have been removed or demolished and the site is designated by the City of Rio Vista (City) for reuse and redevelopment as industrial development and zoned as a Business Park. The proposed project consists of approximately 1.24 acres within the former airport property. The western portion of the project site is occupied by a dirt road that was used to access the former aircraft hangars that were located north of the project site. The hangars have since been removed but the dirt road remains and was not revegetated. The new City of Rio Vista Municipal airport is located approximate two miles to the north and the project site and former airport is the focus of City lead efforts for reuse and redevelopment.

The proposed project occurs on previously disturbed but currently undeveloped and unoccupied land. There are no current on-site operations, but the site has experienced vehicle traffic as numerous tire tracks in addition to the dirt road are evident. The project site is on flat ground and has no significant landform features. The project site is level from west to east and slopes slightly downward north to south falling less than a foot over a distance of approximately 175 feet. The balance of the site consists of bare soil and upland, ruderal vegetation including grasses and shrubs. There are no trees or natural landforms such as rock outcroppings or hillsides on the project site. The project site does not contain any stream channels, waterways, standing water, or wetlands.

Surrounding Land Uses

Surrounding land uses are typically industrial in nature or consist of vacant and undeveloped but disturbed land. The adjacent property to the east is operated by Rio Vista Farms and is improved with a metal industrial building used for cannabis cultivation and sales. The concrete pads of the remnant airport facilities, hardscape, and the Rio Vista Police station are located north of the project site. To the west the project site is adjacent to Poppy House road west of the roadway is an agricultural warehouse property (Poppy House & California Vegetable Specialties). Adjacent to the south is Stan Simi Drive and just beyond is the Rio Vista Business Park Storm Basin.



FIGURE 2: Local Vicinity Map
Rio Vista Manufacturing

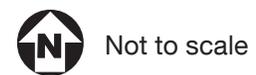
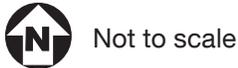




FIGURE 3: Aerial Site View
Rio Vista Manufacturing



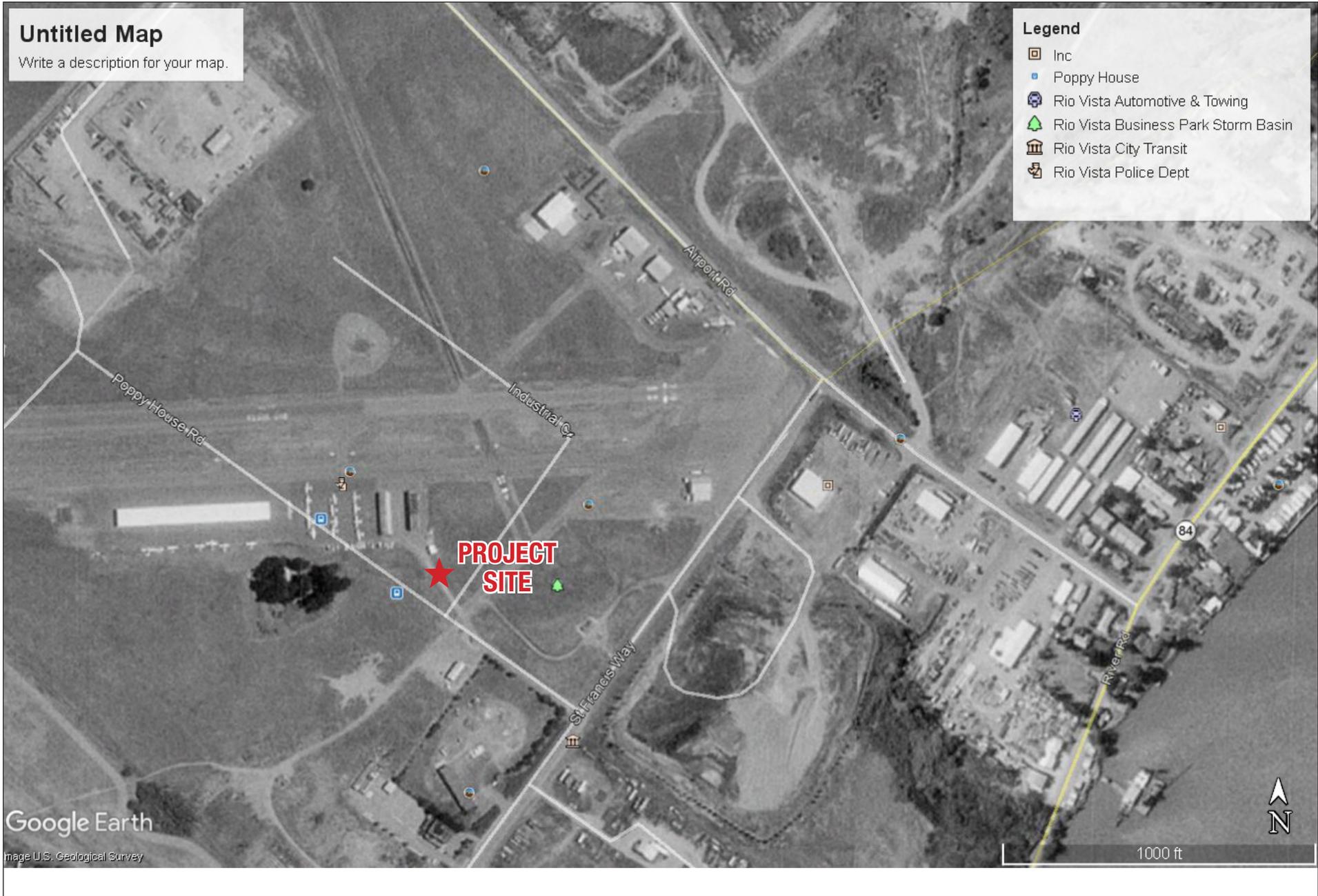


FIGURE 4: Aerial Photograph –
1993
Rio Vista Manufacturing

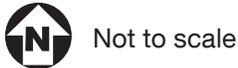
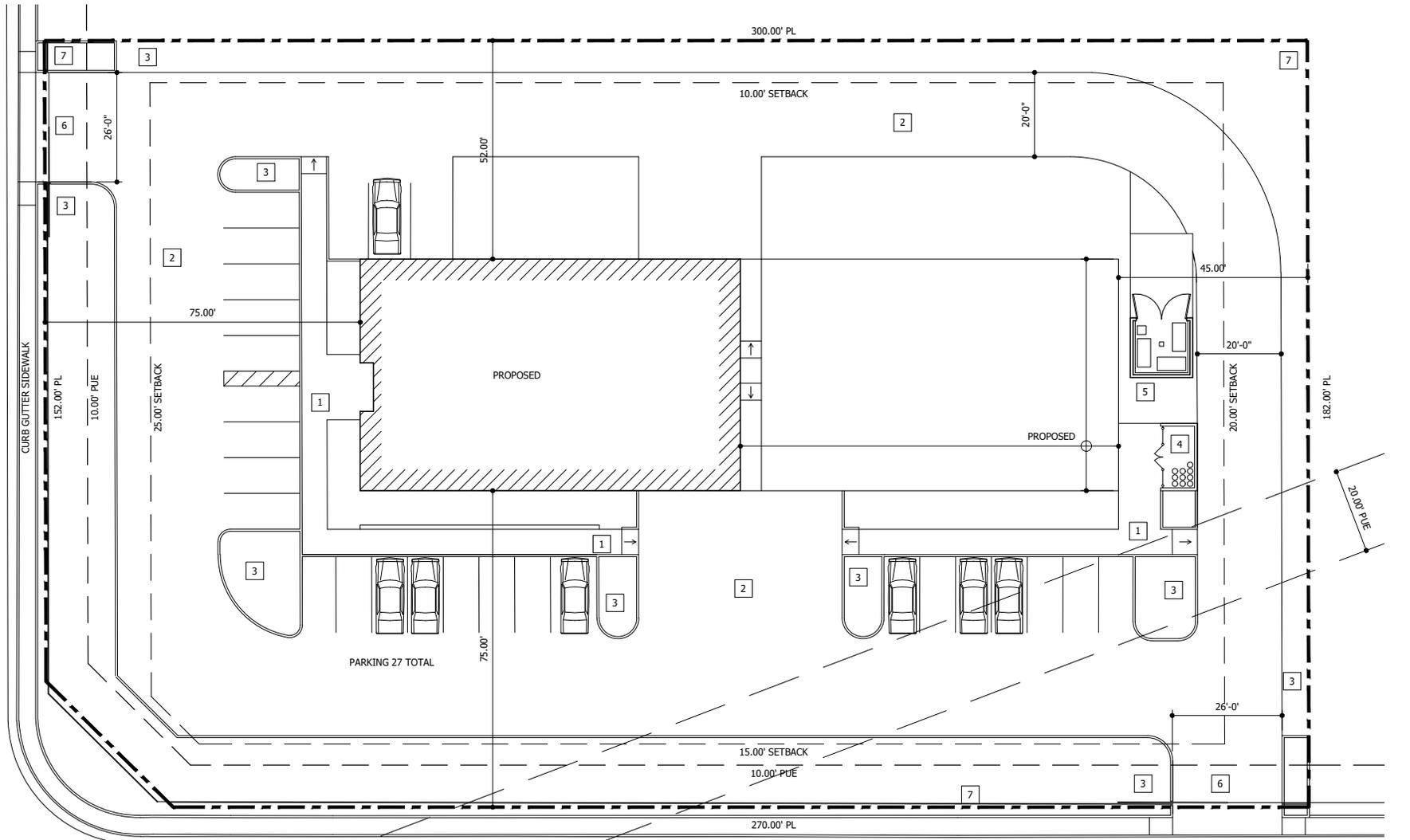




FIGURE 5: Aerial Photograph –
2011
Rio Vista Manufacturing



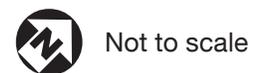
SITE PLAN

SCALE 1:20
 0 10 20 40

KEY NOTES

- 1 CONCRETE SIDEWALK TYPICAL
- 2 AC PAVING TYPICAL
- 3 PLANTER
- 4 GAS STORAGE
- 5 TRASH AND RECYCLING
- 6 SLIDING GATE
- 7 FENCE ENTIRE PERIMETER AT PL

FIGURE 6: Project Site Plan
 Rio Vista Manufacturing



The surrounding land uses are consistent with the sites former use as an airport and ongoing efforts to repurpose the area for industrial business uses. Further out from the project site, land uses patterns are consistent with the adjacent properties. Land uses consist primarily of vacant but disturbed land and redeveloped areas with industrial. Through the business park area there are remnant sections of the runways, taxiways, and other hardscape.

Requested Approvals

The proposed project is expected to require the following approvals:

- Conditional Use Permit
- Site and Architectural Approval for proposed structures
- Adoption of a Development/Operating Agreement
- Cannabis Cultivation and Manufacturing Licenses

The project applicant (Rio Vista Manufacturing) is requesting approval of a cannabis project pursuant to Chapter 17.70 of the City of Rio Vista Zoning Ordinance relating to Cannabis regulations. Approval of the proposed project would allow for development on an approximate 1.24-acre site to be developed with a 4,860 square foot (sf) of for the main structures as well as a trash enclosure, enclosure for gas storage needed to operate the indoor manufacturing and distribution operations, and an approximate 5,000 sf structure to be used as a warehouse for storage.

The project site is located in an urbanizing area and will utilize municipal water supplies. The project will not result in diversion of surface waters for irrigation, impacts to water bodies or habitat, or other issues that would trigger additional State or federal resource permitting beyond what is already required for water quality conformance.

Project Description

The proposed project includes the construction of an approximate 4,860 sf building enclosures for gas storage and trash, and an approximate 5,000 sf structure to be used as a warehouse for storage to be constructed in a single phase. The proposed project would occupy the central portion of the site with parking on the west and south adjacent to Poppy House Road and Stan Simi Drive respectively. Adjacent to east side of the building would be the secure and enclosed gas and trash enclosures. A 20' emergency access lane would be located at the southeasterly corner of the site and would ring the site to and through the westerly parking lot at the 26' wide driveway on Poppy House Road. The proposed site plan is provided in *Figure 6 – Project Site Plan*.

The proposed project would be used for the manufacture and distribution of cannabis products. For these activities the proposed project includes an application for a licenses for manufacturing from the California Department of Food and Agriculture (CDFA) and license for distribution from the Bureau of Cannabis Control (BCC). The manufacturing license allows use the use of volatile solvents as defined by Section 40100 of CCR Title 17. This section also allows for the packaging and labeling of cannabis products on the premises. The project proposes extraction consistent with Section 40220 Permissible Extractions by using a hydrocarbon based volatile solvent in a closed loop system as defined in Sections 40100, 40222, and 40223. CCR Title 17 Division 1 Chapter 13. Manufactured Cannabis Safety provides the regulations pertaining to extraction from cannabis plant materials. Based on the code, extraction is defined as a process by which cannabinoids are separated from cannabis. Manufacturing is defined as the process to

compound, blend, extract, infuse, or otherwise prepare a cannabis product. This includes extraction process; infusion process; packaging or repackaging cannabis products; or labeling or relabeling cannabis products.

Within the western interior of the proposed building rooms would consist of offices, security rooms, locker rooms and restrooms, and the utility and fire controls. The central portion of the structure would be divided east to west by a hallway/corridor. An approximate 660 sf post processing room would be located north of the central corridor. The post processing room would have three worktables, a walk-in hood, and would use alcohol and pentane for the cannabis processing procedures. This area also would contain an emergency shower and eye wash station. The hood is designed by Advanced Extraction labs. The hood would have all required safety systems as well as gas monitoring ensuring compliance with all applicable state and local codes. Sliding front doors enable wide access, an exterior control panel to monitor activities, warning and hazardous materials labels, and an interior fire extinguisher and work area. The proposed model is designed for small to medium extraction efforts. BCC defines extraction as means a process by which cannabinoids are separated from cannabis (BCC, plant material through chemical or physical means.

A second approximate 660 sf room would be located adjacent to the southern wall of the central corridor. This room would consist of two walk in booths for the processing of cannabis. The booth would feature a split system fan/coil, modular extraction platform (mep) heaters and chillers, booth exhaust, mep extraction equipment, a work area, booth supply air, an outside air intake, and split system compressor. Both booths would have the same design and would be side by side against the southerly project wall.

Processing of cannabis would follow a very specific set of procedures within the processing booths (MEPXT70) to ensure only a high quality of product is produced and to ensure the safety of workers. The generalized extraction process that would be used as part of the project is as follows. Cannabis would first go through an intake process and tested to ensure integrity. If it fails testing, the cannabis would be disposed of. A passing batch of cannabis would be stored in the hold freezer until it was ready to undergo the extraction process. This process would result in biosolvents and extracts. The biosolvents would be further distilled and solvents would be reclaimed. Solvents would be stored in containers/tanks and reclaimed gasses would be stored in metal cylinders. The waste material from the extraction process would be separated and disposed of. The extracts also would undergo a process to reclaim solvents as well as produce a final product. The final product would be tested and passing products would be packaged for distribution and failing products would be safely disposed of. The graphic on the following page shows a diagram of the Booth Plan and bubble chart of the Processing Steps.

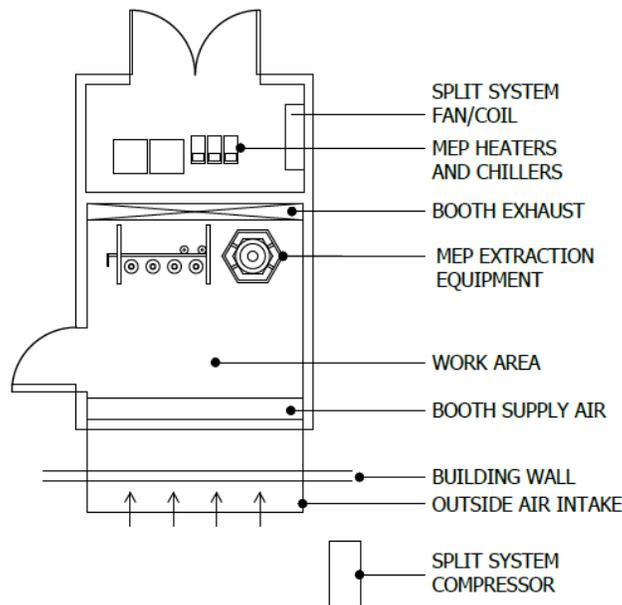
The easterly side of the building would be dedicated to receiving within the intake room and shipping from the distribution room. The intake room would be on the southerly side of the building and would be approximately 480 sf and have a freezer to store products and two lockable caged racks to securely store received materials. The northerly room also would be approximately 480 sf and would have lockable caged racks, a vault, and an office. Both rooms would have interior access doors and larger exterior bays to facilitate shipping and receiving.

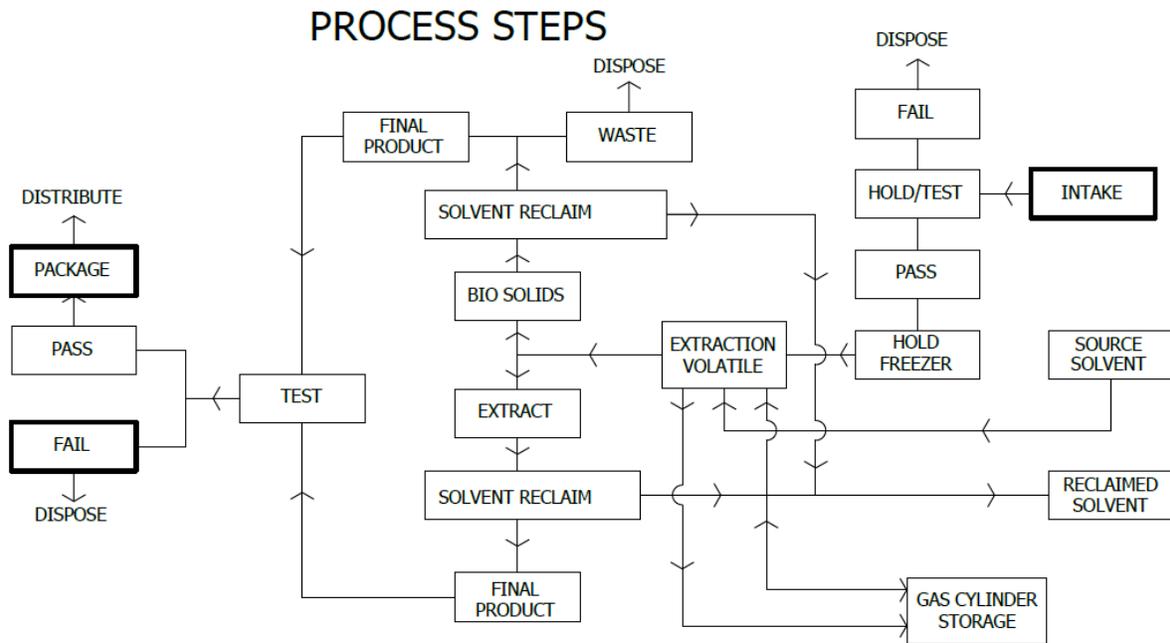
The exterior of the site would contain all required circulation elements, parking, fire lane and access driveways. The 20' fire lane would have emergency only access on the easterly side of the building and continue around the building and link to the nine-space parking lot on the western side of the building and the fifteen-space lot on the southerly side. The proposed project would comply with all Americans with

Disability Act (ADA) requirements for stalls and access. As discussed above, both the fully enclosed and lockable trash enclosure and gas storage area on the easterly side of the building. The gas storage area will not be greater than 500 square feet and will not be more than 2,500 cubic feet of combustible materials. Both the main structure and storage area will contain gas detection equipment with sensors and alarms as required. The proposed project would include a sidewalk adjacent to both Poppyhouse Road and Stan Simi Drive. Between the sidewalk and parking lots would be a landscaped within an approximate 15' setback.

The proposed buildings would be single story industrial prefab metal frame on slab. The buildings would be approximately 20'0" at the bottom of the roof trusses and pitched in the middle to a maximum height of 24'5". The proposed project would be painted or coated within the manufacturers standard range of options and would be consistent with the colors of surrounding buildings. *Figure 7 – Conceptual Elevations*, and *Figure 8 – Project Floor Plan*, show the design and layout of the project.

BOOTH PLAN



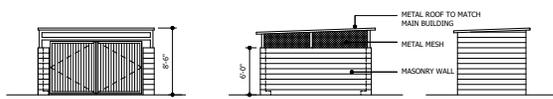


Operations and Methodology

The proposed project would operate during normal business hours (8:00 a.m. to 5:00 p.m.) and typically be open from Monday through Friday. The business; however, depending on the amount or times they received shipments of cannabis to process may be open on weekends and employees may be on-site for longer periods of time. The proposed project would be staffed by 5 total employees, three of which would work full-time, and 2 part time employees depending on workload. It is anticipated that workers would come from the local labor pool from the City of Rio Vista and surrounding areas.

As discussed above, the project proposes to produce extracts from cannabis. The proposed project would not grow any cannabis on-site but would receive processed cannabis from off-site sellers. After processing, the cannabis would be shipped to off-site buyers via a third-party licensed distributor.

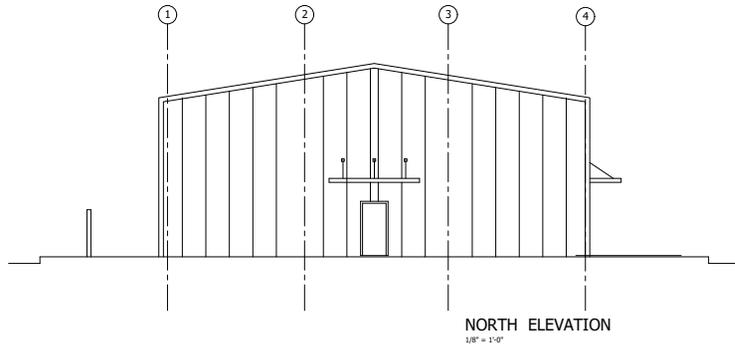
To manage odors and maintain indoor air quality, the proposed project would use the aforementioned MEP system. The proposed project does not include cultivation so the typical odors from this process would not be generated. The existing booths and walk in hoods would be equipped with, and/or additional air filtration systems would be used to minimize odors from on-site processes.



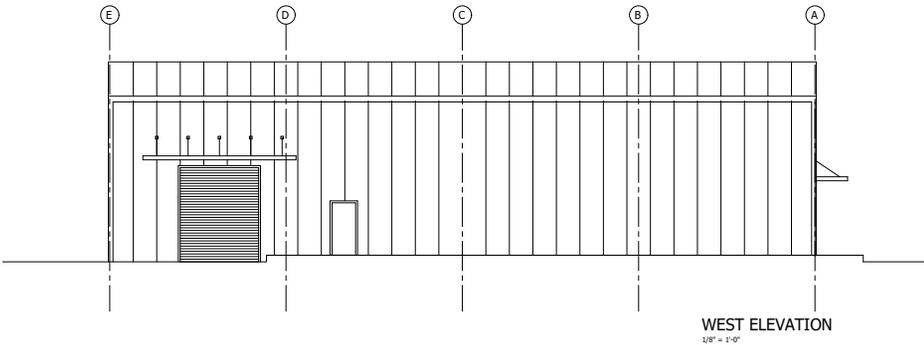
TRASH ENCLOSURE
1/8" = 1'-0"



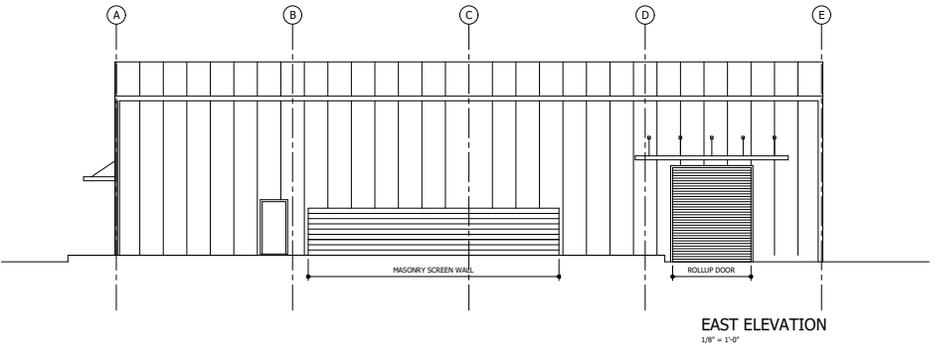
OUTSIDE GAS STORAGE
1/8" = 1'-0"



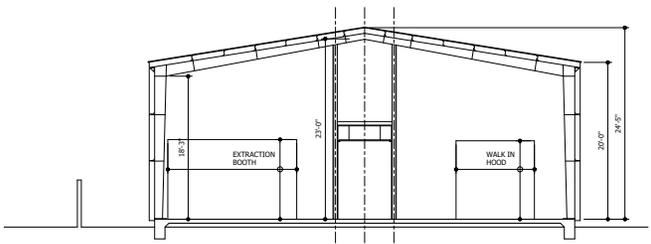
NORTH ELEVATION
1/8" = 1'-0"



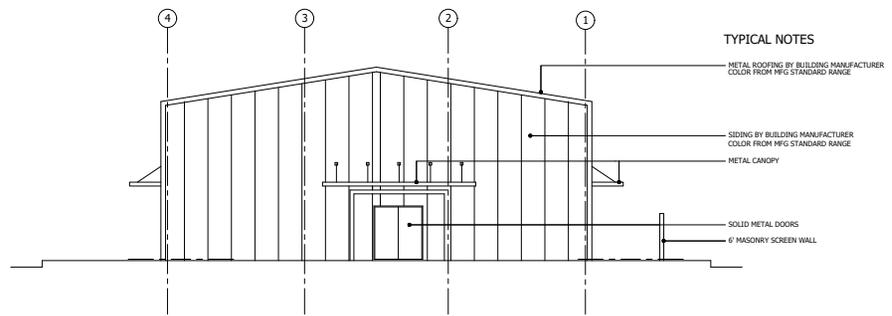
WEST ELEVATION
1/8" = 1'-0"



EAST ELEVATION
1/8" = 1'-0"



A/A.0 SECTION
1/8" = 1'-0"



SOUTH ELEVATION
1/8" = 1'-0"

- TYPICAL NOTES
- METAL ROOFING BY BUILDING MANUFACTURER
COLOR FROM MFG STANDARD RANGE
 - SIDING BY BUILDING MANUFACTURER
COLOR FROM MFG STANDARD RANGE
 - METAL CANOPY
 - SOLID METAL DOORS
 - 6" MASONRY SCREEN WALL

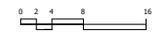
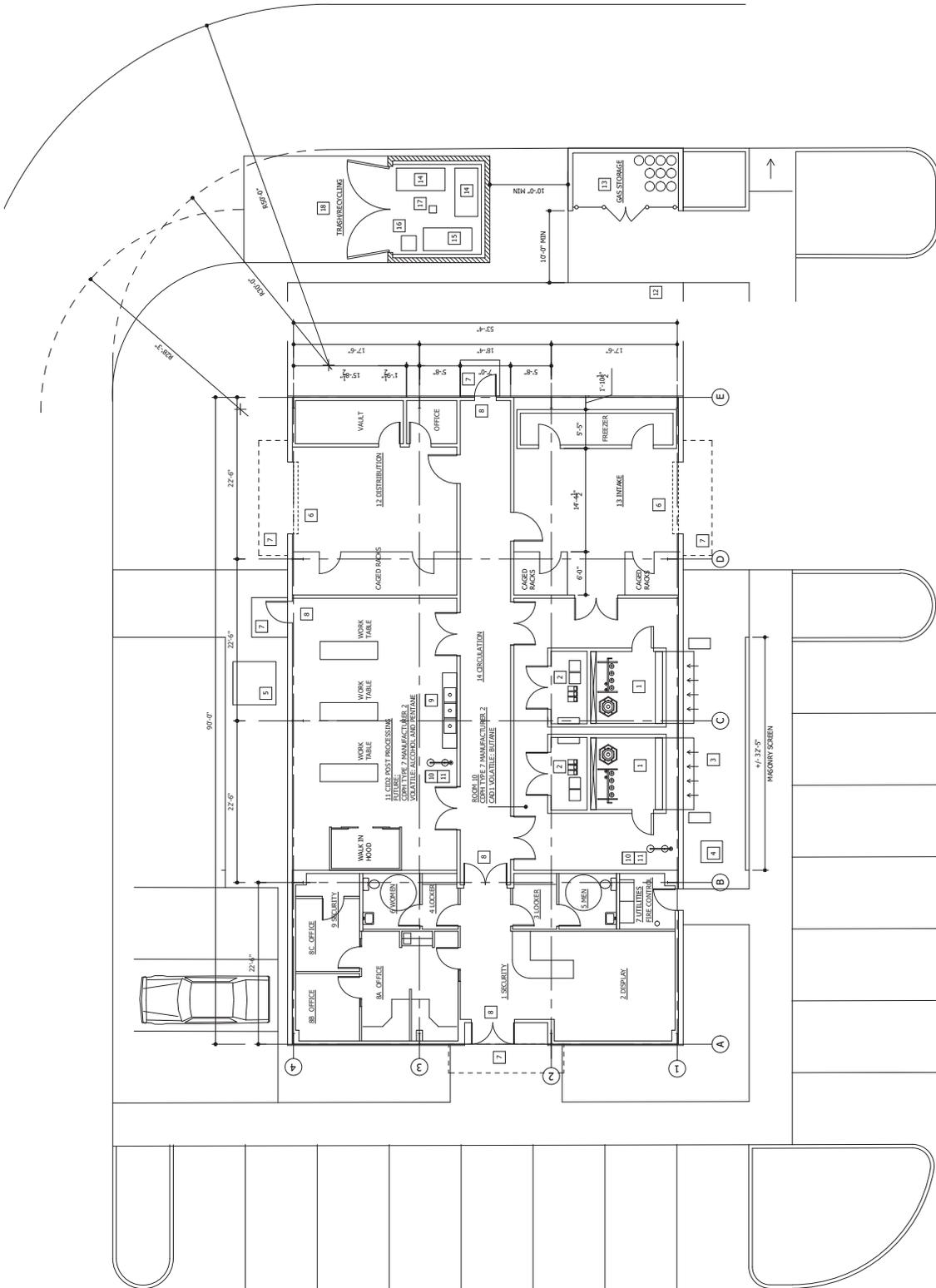


FIGURE 7: Conceptual Elevations
Rio Vista Manufacturing

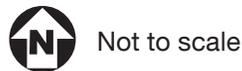
Richard Brann Dr



Poppy House Rd

Stan Simi Dr

FIGURE 8: Project Floor Plan
Rio Vista Manufacturing



City of Rio Vista

Landscaping and Pedestrian Access

Approximately 10% of the overall lot will be landscaped. Groundcover would consist of deer grass (*mulenbergia riggens*). The proposed project also includes shrubs including winter daphne (*daphne odora*), silverberry (*Elaeagnus pungens*), hesperale, lantana hybrids, glossy privet (*Ligustrum lucidum*), heavenly bamboo (*Nandina domestica*), hawthorne (*Raphioles indicia rosea*), and Mexican sage (*Salvia leucantha*). Proposed trees would include fern pine (*Podocarpus gracilior*), Italian cypress (*Cupressus semp*), valley oak (*Quercus lobate*), Chinese pistache (*Pistacia chinensis*), strawberry tree (*Arbutus unedo*), smoke tree (*Continus cogragria*), and pink crape myrtle (*Lagerstroemia indica*). The proposed landscape would be drought tolerant, are all rated with low water usage, and a water efficient irrigation system would be used.

A pedestrian sidewalk would be located between Poppyhouse Road and Stan Simi Drive around the site improvements. The landscaping would be between the sidewalk and parking area. The main entrance to the proposed project would be located on the westerly side of the structure and would be ADA compliant. All other access points to the structure and interior spaces as required would be ADA compliant.

Construction

The project site is flat and covered with upland ruderal vegetation and areas that have been disturbing use as the former Rio Vista Municipal airport or during subsequent reuse and redevelopment efforts. Construction activities would involve the use of heavy equipment for ground preparation, trenching, staking and flagging, installation and extension of on-site utility systems, and typical industrial building techniques needed to erect the building and improve the interior. Construction will require the use of bulldozers, scrapers, and excavators to grade and level the site to the final grade.

Grading would be required to removal and grub off the existing vegetation. Grading operations would include mixing and watering of the soil to enable compaction with equipment such bulldozers and compaction wheels (sheep's foot) needed to create building pads enabling installation of the foundation. Grading is not anticipated to reach a depth greater than two feet. Some excavation for utilities may require deeper trenching. Based on the size of the sight and anticipated depth to grading of approximately 1,020 cubic yards of cut and fill. Grading is anticipated to balance on site, but some import and export may be required depending on the underlying materials.

Concrete trucks and other paving equipment would be used to haul materials and create the driveways, parking areas, interior circulation lane(s) for guests and emergency vehicles, and other hardscape including pedestrian pathways. Construction of proposed project is anticipated to begin in late 2020/Early 2021 and last approximately six month.

Utilities

The proposed project would tie into existing utility lines including, water, electricity, natural gas, wastewater, and storm water drainage facilities already constructed or planned as part of the redevelopment efforts of the former airport site. Extension of utility lines to areas not planned for development would not occur and all extension would occur within other adjoining areas that have been previously disturbed as part of airport operations or as part of on-going redevelopment efforts.

Water and Wastewater

The proposed project would be served by the City of Rio Vista for potable water which is derived from seven groundwater wells and treated at one of three treatment stations. Wastewater would be piped from the project site for disposal of at the Beach wastewater treatment plan (BWWTP) located approximately 1.5 miles to the south or the Northwest WWTP located approximately 0.75 miles to the northeast.

Energy

Pacific Gas & Electric Company (PG&E) would supply electricity and natural gas to the proposed project.

Solid Waste

Solid waste would be disposed of by the Mt. Diablo Resource and Recovery (MDRR). Waste service is anticipated to occur up to two times per week, and non-recyclable waste would be transported to the Keller Canyon Landfill. Green waste would be transported to the Recology Recycling and compost facility in Vacaville.

General Plan and Zoning Code

The project property occupies 1.24 within the City of Rio Vista. For this reason, consistency with the City General Plan and Zoning Code are the most relevant local planning documents related to project review. According to the City of Rio Vista General Plan (RVGP), the project site has a General Plan land use designated as Industrial/Employment Limited (I-E-L) and is zoned as Business Park (B-P). Under this designation and zoning, cannabis cultivation, manufacturing and extraction activities are permitted uses subject to City approval.

The Rio Vista Municipal Code seeks a coordinated approach to development in the Business Park Area. As such, the Code specifically does not allow outdoor cultivation, requires proposed indoor cultivation to go through the applicable planning process and obtain a CUP, building permit, and limits cannabis cultivation in proximity to residences, school, etc. Other requirements of the code include security plans, odor and control and ventilation plans, access restrictions, limitation on lightings, and other measures to ensure safe operation of the facilities.

3.0 INITIAL STUDY CHECKLIST

- 1. Project Title:** Rio Vista Manufacturing
- 2. Lead Agency:** City of Rio Vista
One Main Street
Rio Vista, CA 94571
- 3. Contact Person:** Robert Hickey – City Manager City of Rio Vista
- 4. Date Prepared:** August 28, 2020
- 5. Study Prepared by:** Kimley-Horn
555 Capital Mall, Suite 300
Sacramento, CA 95814
- 6. Project Location:** 10 Poppyhouse Drive
Rio Vista, CA 94571
- 7. Project Sponsor:** JNL Capital LLC
Oakland, CA
- 8. General Plan:** Industrial/Employment Limited (I-E-L)
- 9. Zoning** Business Park (B-P)
- 10. Project Description:** The project site occupies approximate 1.24 acres and is located on the former site of the Rio Vista Municipal Airport which is planned for reuse and redevelopment. The project includes an approximate 4,860 square foot (sf) facility, 140 sf of outdoor storage, and a proposed 5,000 sf on-site warehouse to be used for storage. All buildings will be constructed with ADA compliant parking spaces and access. The proposed project includes cannabis extraction with hoods, and booths for processing. Detached but fully enclosed and lockable waste and recycling area and gas storage area are included. The proposed project would apply for a license for manufacturing from the California Department of Food and Agriculture (CDFA) and a license for distribution from the Bureau of Cannabis Control (BCC). The building would be single-story structure approximately 20 feet (‘) 0 inches (“) on the sides with a pitched centerline approximately 24’5” in height. The structures would be located in the City of Rio Vista Business Park and in an area designated by the General Plan and zoned for industrial uses. Surrounding uses include existing industrial uses to the north and west, and vacant land designated for industrial uses to the south and east.

- 11. Surrounding Land Uses:** The project site within the former Rio Vista Municipal Airport business park. Surrounding uses include existing industrial uses to the north and west, and vacant land designated for industrial uses to the south and east.
- 12. Public Comment Period** August 28, 2020 – September 28, 2020
- 13. Public Agency Approval Needed:** Central Valley Regional Water Quality Control Board (CVRWQCB)
San Joaquin Valley Air Pollution Control District (SCVAPCD)
State Water Resources Control Board (RWQCB)
State Bureau of Cannabis Control
CalCannabis Cultivation Licensing of the California Department of Food and Agriculture (CDFA)
Bureau of Cannabis Control
Manufactured Cannabis Safety Branch of the California Department of Public Health (CDPH)
- 14. California Native American Tribe Consultation:** On July 8, 2020 the City of Rio Vista, acting as the CEQA Lead Agency informed five tribes including the Cortina Rancheria – Kletsel Dehe Band of Wintun Indians; Guidiville Indian Rancheria; United Auburn Indian Community of the Auburn Rancheria; Confederated Villages of Lisjan; and Yocha Dehe Wintun Nation.

Note: The purposed of conducting early consultation as part of the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

4.0 ENVIRONMENTAL ANALYSIS

4.1 Aesthetics

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
a) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				X
b) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
c) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

a) Have a substantial adverse effect on a scenic vista?

The proposed project is located within the City of Rio Vista on the site of the former Rio Vista Municipal Airport. The project site is surrounded by vacant and previously disturbed land, industrial uses, and areas planned for and undergoing redevelopment with industrial uses. The site is flat and is surrounded by flat land with no significant landforms. The project site and surrounding areas do not provide views of scenic resources, nor are the surrounding areas considered scenic resources.

The Sacramento River is located approximately 0.4 miles to the southwest, but due to the distance and minimal elevation change, the river is not visible from the project site. Similarly, due to the elevation of the riverbank and intervening structures, the project site is not visible from the river. While the City of Rio Vista General Plan notes the importance of enhancing the waterfront as a scenic resource, because

the proposed project would not affect the river or affect views from the river, the proposed project would not conflict with this element of the RVGP. Therefore, the proposed project would not affect scenic vistas and no impacts would occur.

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

The proposed project is not located in proximity to any scenic highway. The nearest scenic highways in Solano County are Routes 37 and Route 29 near the city of Vallejo approximately 30 miles to the west (Caltrans, 2020). In addition, the proposed project does not contain any trees, rock outcroppings or historic buildings. Therefore, no impacts would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project site is located in an area designated by the RVGP and Rio Vista Zoning Ordinance for industrial uses within a business park. The project site is in the former Rio Vista Municipal Airport. The areas surrounding the project site are either developed with industrial uses including warehousing, municipal services and facilities, cannabis business, or are currently undeveloped but anticipated to be developed with similar uses consistent with the RVGP and zoning.

The proposed project would be consistent with the surrounding uses and would not result in a visual contrast with existing buildings or planned development. The project site occupies approximately 1.24 acres within the redevelopment area, and would consist of a single one story metal sided building with two detached storage enclosures. The project design is consistent with other existing and planned structures in the vicinity. In addition, the proposed project would include drought tolerant landscaping adjacent to the sidewalk and around the perimeter of the structure. Landscaping would be consistent with City requirements. The balance of the site would consist of two driveways, one for designated emergency access and one for general ingress and egress to the site. The proposed project is consistent with other designs in the area and would not conflict with the visual character of the surrounding areas. The proposed project would not be incompatible with other uses as viewed from surrounding areas. Impacts in this regard would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project would create new sources of light from the indoor growing operations, and outdoor lighting for security, parking, and pedestrian walkways. The proposed project would minimize spill light from the interior of the structure by including a minimal number of windows. Where windows are proposed, shades or other materials would prevent nighttime light from escaping. Exterior lighting in the parking lot, walkways, and security lighting would comply with the City of Rio Vista Municipal Code 17.74.060 -Performance standards related to exterior lighting. While exterior lighting would be adequate to provide for security purposes and sufficient to provide illumination and clear visibility to all outdoor areas, it would be designed to minimize spillover to adjacent properties. The lighting would be stationary, directed away from adjacent properties and public rights-of-way, and would be of an intensity compatible

with the surrounding areas. The project site is located within an industrial area, and is approximately 0.25 miles from the nearest residential area and these impacts would be less than significant. With the incorporation of the listed lighting standards, light impacts in the vicinity of the project would be minimal and less than significant.

The proposed structure would be metal sided and coated. The coating would be designed to minimize glare and would be consistent with the City of Rio Vista Municipal Code Section 17.44.060 that outlines performance standards related to glare. This section states that glare is not allowable in such amounts as to adversely affect the surrounding area or adjoining premises and cannot be a dangerous or objectionable element of a project.

Any signage on the proposed project would comply with Section 17.56.030 Administrative regulations. This section limits illumination and disallows excessive brilliance. This section states that no sign or exterior lighting shall be permitted that produces an unreasonable glare or light spillage onto other properties or into areas not intended to be lit. Lighting that is more intense than is necessary to adequately illuminate the sign or exterior area is not allowed. Should any illuminated signage be used, the proposed project would comply with this section.

Conformance with the above listed codes would ensure that the proposed illumination provides adequate lighting for safety and security but reduces light trespass, glare, skyglow impacts, and offensive light sources as seen from off-site areas. Conformance with the codes would prevent inappropriate, poorly designed or improperly installed outdoor lighting and would ensure lights have fixture shields, are directed, are of uniform intensities, and incorporate light controls. To ensure the proposed project conforms to all lighting requirements, the City would verify the lighting plan conforms to all applicable City. Therefore, the proposed project would not create a new source of substantial light or glare and it would not adversely affect day or nighttime views in the area. Impacts in this regard would be less than significant.

Cumulative Impacts

The proposed project is not located in an area with significant scenic resources, is not located within the vicinity of scenic highway, would not substantially conflict with the existing or planned visual environment, and would not result in a substantial production of light and glare. Cumulative impacts associated with aesthetic resources are typically associated with a project site and its immediate surroundings. Considering the proposed project as well as past, present, and reasonably foreseeable projects are within the same visual environment of the business park and are planned for industrial uses, the additive nature of impacts are anticipated to be less than significant. Accordingly, other projects in the vicinity would be anticipated to have a similar designs and be consistent with industrial uses in the business park. Lastly, all other project would be required to conform to the same requirements related to production of light and glare, thereby reducing their individual effects. Therefore, while the proposed project and other project would result in changes to the visual environment, with the measures listed above, cumulative impacts would remain less than significant.

4.2 Agriculture and Forestry Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</p>				
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>				X
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>				X
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</p>				X
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>				X
<p>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>				X

a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

The proposed project is located in the area that was previously used as the Rio Vista Municipal Airport. The airport was constructed in the 1950’s and since that time the project site was not used for agricultural

purposes. Based on the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (FMMP), the project site is located on "Urban and Built-Up Land." Urban and Built-up land is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures. Therefore, the proposed project would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDOC, 2016).

The project site is located in an area designated by the RVGP for industrial uses and by the Zoning Ordinance as a business park. The project site was previously used as a municipal airport and is not used for agricultural purposes. Considering this and the above listed factors, the proposed project would not result in the conversion of an agricultural resource and no impacts would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

According to the RVGP, the project site has a General Plan land use designation as Industrial/Employment Limited (I-E-L) and is zoned as Business Park (B-P). Under this designation and zoning, cannabis cultivation and related facilities are permitted uses subject to City approval.

The project site does not contain any land designated as farmland and is not actively farmed. The project site is not under an active Williamson Act Contract, is not eligible for a Williamson Act contract and is not adjacent to nor would it affect the function of any land under a Williamson Act contract. No impacts would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

As discussed in discussion a) and b) above, the project site is designated by the General Plan land for use as Industrial/Employment Limited (I-E-L) and is zoned as Business Park (B-P). The proposed project does not involve or require a rezone and the proposed project does not contain any trees or any forest land as defined in Public Resources Code (PRC) Section (§) 12220(g), timberland as defined in PRC § 4526, or timberland zones for timberland production defined by Government Code § 51104(g) The proposed project would result in improvements consistent with the underlying industrial designations and would not impact any forest or timberland. Impacts in this regard would not occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

The project site does not contain any trees or forest land. No conversion would occur. Refer to the discussion in c), above. No impacts would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The proposed project is not located on or adjacent to any area used or designated as farmland, and is not located on or adjacent to any area used or designated as forest or timberland. The proposed project would not affect any area used for these purposes. Refer to a), b), c), and d), above. Impacts would not occur.

Cumulative Impacts

The proposed project is not located on any land used as farmland or an area zoned or designated for use as farmland. The proposed project also does not contain any trees or forest and is not located adjacent to any areas with such resources. The proposed project would not result in a loss of any of these resources nor would it affect the operational value of any such lands. As such, the proposed project would not result in any cumulative loss of such resources and impacts would not occur.

4.3 Air Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) 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?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?			X	

a) Conflict with or obstruct implementation of the applicable air quality plan?

The proposed project is located within the Sacramento Valley Air Basin (SVAB), which is under the jurisdiction of the Yolo-Solano County Air Quality Management District (YSAQMD). The SVAB is designated nonattainment for State and federal health-based air quality standards for ozone. The SVAB is designated nonattainment for State PM_{2.5}. To meet Federal Clean Air Act (CAA) requirements, the YSAQMD has prepared an Air Quality Attainment Plan (AQAP), which was adopted in 1992 and updated in 2003 and would be applicable to the proposed project.

YSAQMD developed advisory emission thresholds to assist CEQA lead agencies in determining the level of significance of a project’s emissions. These are outlined in its CEQA Handbook (YSAQMD 2007). The Sacramento Federal Nonattainment Area (SFNA) is a subset of the SVAB and has adopted the Sacramento Regional 2008 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2017 Ozone Plan).² The YSAQMD is one of the air districts in the SFNA. The 2017 Ozone Plan outlines how the region continues to meet federal progress requirements and demonstrates that the SFNA will meet the 75 parts per billion (ppb) 8-hour ozone NAAQS (Sacramento Metropolitan Air Quality Management District et al. 2017). YSAQMD also prepares a triennial report discussing the progress it has made towards improving the air

² Air districts in the SFNA consist of the SMAQMD and YSAQMD, as well as parts of Feather River Air Quality Management District, El Dorado County Air Quality Management District, and Placer County Air Pollution Control District.

quality and reducing ozone concentrations in its jurisdiction. The 2015 Triennial Assessment was adopted in July 2016; the draft 2018 Triennial Assessment was released in March 2019. YSAQMD’s specific CEQA air quality thresholds are presented in *Table 1: Thresholds of Significance for Criteria Pollutants of Concern*.

Table 1: Thresholds of Significance for Criteria Pollutants of Concern

Pollutant	Threshold of Significance
ROG	10 tons/year
NO _x	10 tons/year
PM ₁₀	80 lbs/day
CO	Violation of the CAAQS

Source: Yolo Solano Air Quality Management District 2007.
 CAAQS = California Ambient Air Quality Standards; CO = carbon monoxide; NO_x = nitrogen oxide; PM₁₀ = particulate matter no more than 10 microns in diameter; ROG = reactive organic gases.
 Thresholds apply to construction and operational emissions generated within the YSAQMD.
^a Thresholds apply to construction and operational emissions generated within the YSAQMD.

A project is deemed inconsistent with air quality plans if it results in regional population, employment, or vehicle-miles-traveled (VMT) growth that exceeds estimates used to develop the applicable air quality plans. The air quality plans are based on growth projections from the Sacramento Area Council of Governments (SACOG) and local plans, including the general plans of city and county. Projects that propose development that are consistent with the growth anticipated by SACOG’s MTP/SCS and the Cities and Counties general plans would be consistent with YSAQMD’s AQAP.

The proposed project involves indoor manufacturing and distribution of cannabis. The project site would occur on approximately 1.24-acre with a total 4,860 square feet facility plus approximately 140 sf of outdoor storage as well as a separate 5,000 sf storage facility. The proposed project would be constructed in one phase. The anticipated construction duration for the proposed project would be approximately one year. Stationary sources, such as structures and businesses, that would comply with YSAQMD rules and regulations are generally not considered to have a significant air quality impact. The proposed project is considered a stationary source, and in addition, because it is not residential in nature would not directly induce growth in the county or result in long-term development that would conflict with the County’s general plan growth forecast.

Regarding construction, the proposed project would be subject to Regulation II, Rule 2.8 (Particulate Matter Concentrations), of the YSAQMD. The purpose of Regulation II, Rule 2.8 is to limit the emissions of particulate matter (PM) from any source operation which emits, or may emit, dust fumes, or total suspended PM.

As shown in the discussion below, construction and operation of the proposed project would not exceed any established YSAQMD thresholds. Therefore, implementation of the proposed project would not obstruct implementation of an air quality plan and impacts would be less than significant.

- b) *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?*

Short-Term Construction Emissions

Construction-generated emissions are short-term and temporary, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact. A portion the project site was previously used as an airport runway or taxiway and includes existing pavement. The proposed project does not include any demolition. The project anticipates approximately 510 cubic yards (cy) of exported topsoil and 510 cy of imported soil materials. Temporary emissions from site preparation and excavation, as well as from motor vehicle exhaust associated with construction equipment and the movement of equipment across unpaved surfaces, worker trips, etc., would occur. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities.

Table 2: Construction Related Emissions presents construction emissions generated by the proposed project in the YSAQMD in tons per year and pounds per day.

Table 2: Construction Related Emissions

Construction Year	Pollutant				
	Reactive Organic Gases (ROG) tons/yr	Nitrogen Oxide (NO _x) tons/yr	Carbon Monoxide (CO) tons/yr	Coarse Particulate Matter (PM ₁₀) lbs/day	Particulate Matter (PM _{2.5}) tons/yr
2020	0.06	0.48	0.41	6.69	0.03
2021	0.21	1.15	1.10	0.95	0.06
Maximum	0.21	1.15	1.10	6.69	0.06
<i>YSAQMD Significance Threshold^{1, 2}</i>	10	10	-	80	-
Exceed YSAQMD Threshold?	No	No	-	No	-

YSAQMD = Yolo Solano Air Quality Management District; CO = carbon monoxide; NO_x = nitrogen oxide; PM_{2.5} = particulate matter no more than 2.5 microns in diameter; PM₁₀ = particulate matter no more than 10 microns in diameter; ROG = reactive organic gases; - = no threshold.

1. In developing these thresholds, YSAQMD considered levels at which project emissions are cumulatively considerable. Consequently, exceedances of project-level thresholds would be cumulatively considerable.

2. YSAQMD considers violations of the CO ambient air quality standard significant. Refer to Impact AQ-c.

3. Source: Refer to the CalEEMod outputs provided in Appendix A, Air Quality Data.

As shown in Table 2, the proposed project would not exceed YSAQMD thresholds. However, to ensure that temporary construction effects and nuisance emissions are adequately addressed, the following mitigation is required:

MM AQ-1 Construction Dust Mitigation. The applicant shall implement the following best practices during construction:

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Haul trucks shall maintain at least 2 feet of free board.
- Cover all trucks hauling dirt, sand or loose materials.
- Apply non-toxic binders (e.g. latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area.

- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas soon as possible.
- Cover inactive storage piles.
- Sweep access road if visible soil material is carried out from the construction site.
- Treat accesses to a distance of 100 feet from the paved road with a 6 to 12-inch layer of wood chips or mulch.
- Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel.

Implementation of MM AQ-1 would reduce construction impacts to a less than significant impact.

Long-Term Operational Emissions

Project-generated increases in emissions would be predominantly associated with motor vehicle use by employees and deliveries travelling to and from the site. To a lesser degree, secondary effects could occur from increases in emissions from increased power usage during the growing and processing phases, landscape maintenance equipment, and architectural coatings. All operations would occur indoors, and no on-site burning of cannabis material are proposed and no emissions in this regard would occur.

Table 3: Maximum Project Operational Emissions shows that the proposed project’s maximum emissions would not exceed YSAQMD operational thresholds.

Table 3: Maximum Project Operational Emissions

Emission Source	Pollutant				
	Reactive Organic Gases (ROG) tons/yr	Nitrogen Oxide (NO _x) tons/yr	Carbon Monoxide (CO) tons/yr	Coarse Particulate Matter (PM ₁₀) lbs/day	Particulate Matter (PM _{2.5}) tons/yr
Area	0.05	0.00	>0.01	>0.01	0.00
Energy	>0.01	>0.01	>0.01	>0.01	>0.01
Mobile	0.01	0.06	0.11	0.20	0.01
Total Project Emissions	0.06	0.06	0.11	0.20	0.01
<i>YSAQMD Significance Threshold^{1, 2}</i>	<i>10</i>	<i>10</i>	<i>-</i>	<i>80</i>	<i>-</i>
Exceed YSAQMD Threshold?	No	No	-	No	-

YSAQMD = Yolo Solano Air Quality Management District; CO = carbon monoxide; NO_x = nitrogen oxide; PM_{2.5} = particulate matter no more than 2.5 microns in diameter; PM₁₀ = particulate matter no more than 10 microns in diameter; ROG = reactive organic gases; – = no threshold.

1. In developing these thresholds, YSAQMD considered levels at which project emissions are cumulatively considerable. Consequently, exceedances of project-level thresholds would be cumulatively considerable.

2. YSAQMD considers violations of the CO ambient air quality standard significant. Refer to Impact AQ-c.

3. Source: Refer to the CalEEMod outputs provided in Appendix A, Air Quality Data.

As shown in Table-3, operation of the proposed project would not exceed YSAQMD thresholds. Therefore, operations of the proposed project would have a less than significant impact. However, to limit PM_{2.5} emissions due to project operations, MM AQ-2 would prohibit open burning of cannabis material.

MM AQ-2 Prohibition of Open Burning of Cannabis Material. The applicant and individual license holders shall be prohibited from open burning of cannabis materials as part of project operations.

Implementation of MM AQ-2 would ensure than impacts remain less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Toxic Air Contaminants (TACs)

The proposed project would not create a significant hazard to surrounding residents and other sensitive receptors through exposure to substantial pollutant concentrations such as particulate matter during construction activities and/or other toxic air contaminants (TACs).

Sensitive land uses are generally defined as locations where people reside or where the presence of air emissions could adversely affect the use of the land. Typical sensitive receptors include residents, schoolchildren, hospital patients, and the elderly. The nearest sensitive receptors are residential uses located approximately 1,300 feet to the northwest of the project site. However, the proposed project would not produce concentrations of TACs; therefore, there impact regarding stationary or mobile TACs would be less than significant.

Carbon Monoxide Hotspots

Typically, substantial pollutant concentrations of carbon monoxide (CO) are associated with mobile sources (e.g., vehicle idling time). Localized concentrations of CO are associated with congested roadways or signalized intersections operating at poor levels of service (LOS E or lower). High concentrations of CO may negatively affect local sensitive receptors (e.g., residents, schoolchildren, or hospital patients). As identified above; however, the nearest sensitive receptors are located approximately 1,300 feet from the project site. Therefore, impacts on sensitive receptors would be less than significant.

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they can be unpleasant, leading to distress among members of the public and can generate citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose people to objectionable odors would have a significant impact.

Project construction would use a variety of gasoline- or diesel-powered equipment that would emit exhaust fumes. While exhaust fumes, particularly diesel exhaust, may be considered objectionable by some people, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source.

Construction-related odors would be less than significant, as there are no sensitive receptors closer than approximately 1,300 feet. In addition, Mitigation Measure MM AQ-1 would reduce these emissions to the extent feasible based on the type and availability of equipment for a specific task.

Odors directly related to marijuana manufacturing are likely to be noticed in the general area of a project. Cannabis gives off distinctive, sometimes pungent, and sometimes “skunky” odor that can be either pleasant or disagreeable, depending on the receptor.

As part of the proposed Project, all manufacturing and processing of cannabis products would occur indoors. Per the City’s ordinance, the proposed project must have a ventilation and filtration system installed that shall prevent cannabis plant odors from exiting the interior of the structure. The ventilation and filtration system must be approved by the building official and installed prior to commencing manufacturing within the detached, fully enclosed and secure structure. An Air District Authority to Construct and Permit to Operate is required for odor control devices, fume hoods and engineer generator sets and may require specific permitting depending upon the operation associated with each license³. With implementation of standard conditions, and considering that there is not a concentration of sensitive receptors nearby, this impact would be less than significant.

Cumulative Impacts

A project that has a significant impact on air quality with regard to emissions of PM₁₀, PM_{2.5}, NO_x and/or ROG_s as determined above would have a significant cumulative effect. In the event direct impacts from a project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions from the proposed project, in combination with the emissions from other past, present, or reasonably foreseeable future projects are in excess of screening levels identified above, and the project’s contribution accounts for more than an insignificant proportion of the cumulative total emissions. With regard to past and present projects, the background ambient air quality, as measured at the monitoring stations maintained and operated by the YSAQMD, measures the concentrations of pollutants from existing sources. Past and present project impacts are therefore included in the background ambient air quality data.

The proposed project would contribute to cumulative impacts from construction and operational emissions. However, as discussed above, the proposed project would not result in a new air quality impact. Therefore, the proposed project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed. Cumulative impacts would be less than significant.

³ City of Rio Vista Municipal Code, Chapter 17,70. Section 17.70.030 Commercial cultivation of cannabis regulated.

4.4 Biological Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

A biological analysis was completed to review the potential for impacts to biological resources and is provided in Appendix B. This section summarizes the results of that analysis.

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Candidate, sensitive, or special status species are commonly characterized as species that are at potential risk or actual risk to their persistence in a given area or across their range. These species have been identified and assigned a status ranking by governmental agencies such as the CDFW, the USFWS, and nongovernmental organizations such as the CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this biological review, special status species are defined as the following:

- listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA);
- listed or candidates for listing as threatened or endangered under the California Endangered Species Act (CESA);
- identified by California Department of Fish and Wildlife (CDFW) as Species of Special Concern;
- listed as Fully Protected under the California Fish and Game Code;
- listed as rare under the California Native Plant Protection Act;
- considered jointly by CDFW and CNPS to be "rare, threatened, or endangered in California" and assigned one of the following California Rare Plant Ranks (CRPR):
 - CRPR 1A - presumed extinct in California;
 - CRPR 1B - rare, threatened, or endangered in California and elsewhere;
 - CRPR 2A - presumed extirpated in California, but more common elsewhere;
 - CRPR 2B - rare threatened, or endangered in California, more common elsewhere;
 - CRPR 3 - Plants About Which More Information is Needed (review list)
- considered a locally significant species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G); otherwise meet the definition of rare or endangered under CEQA §15380 (b) and (d).

Based on known regional occurrence data, Swainson's hawk (*Buteo swainsoni*) is the only special status species with the potential to occur on the project site. Small mammal burrows present on a portion of the site may provide marginal foraging habitat for Swainson's hawk. No suitable nesting habitat is present on site and no trees would be removed. However, there is potential nesting habitat within 0.25 miles of the project site east of Airport Road. Within urban areas, construction activities (e.g., heavy equipment operation) within 0.25 miles could have potential to disturb nesting species. Implementation of **MM BIO-1** would reduce construction impacts to a less than significant.

Once constructed, the project would be adjacent to existing and similar industrial uses. Following construction, suitable foraging areas would remain in the vicinity. Thus, operation related impacts are anticipated for Swainson's hawk.

There were 23 additional special status species that were reviewed and found unlikely to occur on site. The lack of potential for these species to occur is mainly attributed to the highly disturbed nature of the site, the site is surrounded by roads and existing disturbed or developed areas, and the lack of aquatic and riparian habitats in the project area and vicinity.

Implementation of MM BIO-1 would reduce construction impacts to a less than significant.

MM BIO- 1: If construction activities are planned to begin after March 1, a preconstruction breeding survey for Swainson's hawks will be conducted throughout areas of suitable nesting habitat within 0.25 miles of the project site. If a Swainson's hawk nest is observed within 0.25 mile of planned construction activities, CDFW will be contacted to determine whether project-related activities are likely to impact the nesting pair and whether any avoidance and minimization measures must be established to avoid impacts.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Sensitive habitats include (a) areas of special concern to resource agencies; (b) areas protected under CEQA; (c) areas designated as sensitive natural communities by the CDFW; (d) areas outlined in Section 1600 of the California Fish and Game Code; (e) areas regulated under Section 404 of the CWA; and (f) areas protected under local regulations and policies. No riparian habitat or other sensitive natural communities occur within the project boundaries; therefore, no impact would occur as a result of the project.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological?

No wetlands or other jurisdictional waters were observed on site during the July 2020 site visit. A review of U.S. Geological Survey National Hydrography Data shows that no drainage features exist in the project site. Natural Resource Conservation Service (NRCS) web soil survey reports the site is comprised entirely of Tujunga fine sand. Site observations were consistent with the NRCS data and little variability in soil type was observed where soil was present and visible. This soil type has a high permeability, is excessively drained and depth to a restrictive layer, which would hold water, is more than 80 inches deep. Thus, the soil on site is not conducive to holding water, creating a flooded or ponding condition. Thus, the site is unlikely to have seasonal wetlands, marshes, or vernal pools to emerge during wetter months. No state or federally protected wetlands, marshes, or vernal pools exist on site; therefore, no impact would occur as a result of the project.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas, such as foraging sites, breeding sites, cover

areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. The project site was previously disturbed and is currently a ruderal habitat that is surrounded by roads and industrial development. The conversion of approximately 1.24 acres of previously disturbed areas comprised of ruderal habitat would not significantly impact wildlife. Several special status species with potential to occur in the broader region, require aquatic, marshy, estuarine, or riparian habitats and/or suitable upland adjacent habitat. There is a lack of aquatic habitat on the project site and in the vicinity to facilitate migration and dispersal of special status species which can occur in the region. Therefore, impacts on wildlife habitat and movement would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would not conflict with the Rio Vista Municipal Code or Ordinances, nor would it conflict with any of the policies described in the Rio Vista General Plan that protect biological resources. The project is not located within Sensitive Local Resource Areas as identified in Figure 10-2 of the City of Rio Vista General Plan. The project is proposed within and is consistent with the industrial land use designation in the General Plan. The project would not conflict with any local policies or ordinances protecting biological resources; therefore, no impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The City of Rio Vista is a plan participant in the Draft Solano County Multispecies Habitat Conservation Plan (HCP) and the project site is within the plan area covered by the HCP. The HCP allows agencies to issue Incidental Take Permits to project applicants for impacts to federal and state listed endangered species within the plan area. The project would not impact federal or state listed species and would not conflict with provisions of the HCP. Thus, no impact would occur.

Cumulative Impacts

The City of Rio Vista plans to develop surrounding areas within the industrial land use designations as envisioned in the General Plan. This would include other cannabis cultivation facilities in the immediate area. There is a lack of habitats for special status species and impacts to biological resources due to this project will be less than significant. Future developments would be subject to CEQA review and entitlements and would be required to implement mitigation measures to reduce impacts to biological resources. Also, the surrounding areas designated for industrial land use appear to also be previously disturbed and/or have limited habitats suitable for special status species and few impacts to special status species would be anticipated. Thus, cumulative impacts would be less than significant.

4.5 Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

a) *Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?*

Historic resources are standing structures of historic or aesthetic significance. Architectural sites dating from the Spanish Period (1529–1822) through the post-World War II period (1945–1955) are generally considered for protection if they are determined to be historically or architecturally significant. Sites dating after the post-World War II period may also be considered for protection if they could gain significance in the future. Historic resources are often associated with archaeological deposits of the same age.

City of Rio Vista

Colonel N. H. Davis established the town site of Rio Vista as Brazos del Rio in 1855m, which was initially built near the Sacramento River. As the only steamboat landing between Sacramento and Benicia, the town prospered and in 1858, the Rio Vista post office was established. The town also gained fame for its salmon fishing due to its presence on the river. In January 1862 the town was largely destroyed, and its wharves were reconstructed while the central town itself was rebuilt further away from the river. The town also continued to be an important port for agricultural products (Keegan 1989) and today, a portion of the City economy relies on agricultural as well as thriving commercial businesses adjacent to the Sacramento River, in the downtown area, and along SR 12 (Solano County, 2008).

Former Rio Vista Airport

The project site is located on the former Rio Vista Airport, which is depicted to have been built post World War II on the 1952 USGS topo map. The airport closed in 1995 when the City built a new airport to take

its place that year. The new airport (current Rio Vista Airport) is located approximately 2 miles from the former Rio Vista Airport to the northeast. The former Rio Vista Airport still contains portions of several runways, taxiways, ramps, and hangars.

According to the Office of Historic Preservation (OHP), there is only one resource (e.g. Delta King) listed in the National Register of Historic Places (NRHP) in the City of Rio Vista. It is important to note that while the Delta King is listed in the City of Rio Vista, it is currently located in the City of Sacramento. The Delta King is a 285-foot-long steamboat built in 1924 and has been used for naval service, passenger service, and as a bunkhouse. The boat has changed hands several times throughout the years. In 1974, the boat was brought to Rio Vista to be prepared for use by the Quimby Island Reclamation District, but the company went bankrupt. In 1978, the boat was listed on the NRHP database. While the Delta King is listed in the City of Rio Vista, it has been permanently moored along the Old Sacramento waterfront in the City of Sacramento since 1985. The project site is located approximately 30 miles from this structure. According to the records search conducted by the NWIC, no recorded buildings or structures within the proposed project area were identified. Given this, there is a low possibility for any buildings or structures 45 years or older to be within the project area. Therefore, the proposed project would have a less than significant impact in this regard.

Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Archaeological resources are places where human activities have measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (the period before written record) or historic (after the introduction of written record). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area.

The archeological record for Solano County, which includes the area of Rio Vista, begins in the prehistoric period which is generally considered the time before 10,000 years ago. From this point begins the Lower Archaic Period that generally dates from 10,000–6,000 Years Before Present (BP). The oldest known archaeological component in this region of central California is from the Los Vaqueros Reservoir area outside of Solano County, in eastern Contra Costa County. Following the Lower Archaic Period, the Initial Middle Archaic Period generally dates from 6,000 to 4,500 BP. With the exception of isolated human burials, extensive early Middle Archaic deposits were not known in the San Francisco Bay/Sacramento–San Joaquin Delta (Bay-Delta) region until the Los Vaqueros Reservoir project in 1996 (Solano County, 2008).

Following the Initial Middle Archaic Period, the Terminal Middle Archaic Period generally dates from 4,500 to 2,500 BP. Several buried sites in Solano County date to this period, including CA-CCO-637 and CA-CCO-696 at Los Vaqueros Reservoir; CA-CCO-308 in the San Ramon Valley (Fredrickson 1966); and CA-SOL-315 and CA-SOL-391 in Green Valley; and a surface site dated to this period sits on a hillside overlooking the southern side of San Pablo Bay (Solano County, 2008). All of the Terminal Middle Archaic sites in Solano County have produced human remains, and most contain intact burials. A variety of artifacts are associated with the Terminal Middle Archaic Period, including side-notched and stemmed projectile points, rectangular abalone ornaments, shaped and unshaped mortars and pestles, and rectangular Olivella shell beads (Solano County, 2008).

The Upper Archaic Period dates after the Initial Middle Archaic Period from 2,500 to 1,300 BP. Upper Archaic deposits have been identified throughout the lowland valleys of the Coast Ranges and along the shores of San Francisco and Suisun Bays (Solano County, 2008). Following the Upper Archaic Period dates the Emergent Period from 1,200 to 200 BP. The distinctive cultural pattern of the Emergent Period, the Augustine Pattern, is marked by the appearance, for the first time, of small arrow-sized projectile points, beautifully trimmed show mortars, flanged pestles, flanged steatite pipes, and chevron-designed bird-bone tubes. Large villages of hundreds of people are thought to have been located in the Delta region, while small hamlets composed of one or two extended families were located in many of the smaller valleys (Solano County, 2008). Several ethnohistorical and ethnographic accounts describe the Patwin and the Miwok who were the native inhabitants of what is now Solano County.

Former airport activities and on-going redevelopment have disturbed the immediate ground surface in the project area; however, intact historical/archeological resources may be discovered below the existing surface layer in land subject to ground-disturbing activities. According to the records search conducted by the NWIC, no archaeological resources have been recorded in the proposed project area. However, NWIC concludes that there is a moderate potential for identifying unrecorded Native American archaeological resources. Therefore, pursuant to Public Resource Code (PRC) Section 21083.2, should any cultural resources be encountered during construction, all work would cease until the find has been evaluated and mitigation measures (MM CUL-1 and MM CUL-2) are implemented to protect any cultural find. Compliance with PRC Section 21083.2 and corresponding mitigation measures below would ensure the project would not cause a substantial adverse change in the significance of an archaeological resource. Impacts would be less than significant in this regard.

MM CUL- 1: During ground disturbing activities, if any archeological, paleontological or tribal resources (e.g., evidence of past human habitation or fossils) are found, the project applicant and/or its contractor shall cease all work within 50 feet of the discovery and notify the City of Rio Vista Community Development Department, Planning Division immediately. The project applicant and/or its contractor shall retain a qualified archaeologist, paleontologist and Native American representative to evaluate the finds and recommend appropriate resource protection plan for the inadvertently discovered resource(s). The City and the applicant shall consider the recommendations and agree on implementation of the measure(s) that are feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, or other appropriate measures. (Health and Safety Code Section 7050.5).

Disturb any human remains, including those interred outside of dedicated cemeteries?

Based on nearby studies and the past uses of the project site and general project area, there is a very low likelihood for prehistoric and/or historic era resources to exist on the project site. This would include the potential for the project area to have been used as a burial site. Nonetheless, there may be a possibility, of unanticipated and accidental discoveries of human remains during ground-disturbing project-related activities. If such remains are located, this could lead to their damage, destruction, or loss and would be considered a significant impact. While the potential is considered very low, mitigation to reduce the potential effects of inadvertent discovery are required and MM CUL-2 would be implemented. Implementation of this measure would reduce impacts to less than significant.

MM CUL- 2: If human remains either informally interred or associated with a burial (i.e. grave goods) are discovered during construction, the project applicant and/or its contractor shall cease all work within 50 feet of the find and notify the City of Rio Vista Community Development Department, Planning Division and the County Coroner. Notifications shall occur immediately and in accordance with California Health and Safety Code Section 7050.5. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission and shall follow the procedures outlined in CEQA Guidelines Section 15064.5(d) and (e) regarding treatment and disposition of recovered cultural items. The Commission will designate a Most Likely Descendant (MLD) who will be authorized to provide recommendations for management of the Native American human remains and any associated materials or objects (Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5).

Cumulative Impacts

Cumulative impacts to cultural resources are typically considered to be site specific and mitigated on a project by project basis. The proposed project would occur within the former Rio Vista Airport site which is not a designated historic resource and because of past disturbances and operations as an airport, is thought to have a very low potential of containing historic, cultural, or archaeologically significant resources. Taken in sum with other past, present, and reasonably foreseeable projects, some of which would occur within the same general vicinity and also would undergo separate CEQA review and have mitigation applied, cumulative impacts would be less than significant.

4.6 Energy

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

The Energy section is primarily based on information, guidance, and analysis protocol provided by the Yolo-Solano Air Quality Management District (YSAQMD). In addition, the section utilizes information obtained from the County of Solano Climate Action Plan⁴, and the California Emissions Estimator Model (CalEEMod) version 2016.3.2.

Energy use related to the proposed project would include energy directly consumed for special lighting, ventilation and air conditioning systems. Indirect energy consumption would be associated with the generation of electricity at power plants. Transportation-related energy consumption includes the use of fuels and electricity to power cars, trucks, and distribution facilities. Energy would also be consumed by equipment and vehicles used during project construction and routine maintenance activities.

In order to ensure energy implications are considered in project decisions, Appendix F of CEQA Guidelines requires a discussion of the potential energy impacts of projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. The main forms of available energy supply are electricity, natural gas, and oil.

Regulatory

Renewable Energy Standards

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the state’s electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger

⁴ County of Solano. *Solano County Climate Action Plan*. February 2010.

continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

California 2007 Energy Action Plan Update

The 2007 Energy Action Plan II is the State's principal energy planning and policy document. The plan describes a coordinated implementation strategy to ensure that California's energy resources are adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the state and its electricity providers would invest first in energy efficiency and demand-side resources, followed by renewable resources, and only then in clean conventional electricity supply to meet its energy needs.

Building Codes

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 9, 2018, the CEC adopted the 2019 Building Energy Efficiency Standards, which took effect on January 1, 2020.

The 2019 Standards will improve upon the 2016 Standards. Under the 2019 Title 24 standards, residential buildings are expected to be about 7 percent more energy efficient, and when the required rooftop solar is factored in for low-rise residential construction, residential buildings that meet 2019 Title 24 standards use about 53 percent less energy and non-residential buildings use 30 percent less energy than those built to meet the 2016 standards.

California Green Building Standards Code

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may

adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2019 and went into effect January 1, 2020.

2006 Appliance Efficiency Regulations

The California Energy Commission adopted Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) on October 11, 2006. The regulations were approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both Federally regulated appliances and non-Federally regulated appliances. While these regulations are now often viewed as “business-as-usual,” they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

California Utility Efficiency Programs (Senate Bill 1037 and Assembly Bill 2021)

SB 1037 and AB 2021 require electric utilities to meet their resource needs first with energy efficiency. California Utility Efficiency Programs have also set new targets for statewide annual energy demand reductions.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program⁵ with the goal of increasing the annual percentage of renewable energy in the state’s electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (*Public Utilities Code* Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California’s commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the state’s load-serving entities to meet this target. In October 2015, then-Governor Jerry Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Existing Energy Settings

Electricity and Natural Gas

Currently PG&E provides energy (electricity and gas) to the City of Rio Vista. PG&E generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. In 2018, natural gas facilities provided 15 percent of PG&E’s electricity delivered to retail customers; nuclear plants provided

⁵ The Renewable Portfolio Standard is a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. The policy ensures that a minimum amount of renewable energy is included in the portfolio of electricity resources serving a state or country.

34 percent; hydroelectric operations provided 13 percent; renewable energy facilities including solar, geothermal, and biomass provided 39 percent.⁶

The proposed project site is located within 100 feet of other existing developments, that are currently supplied electricity and gas services via PG&E. Additionally, the project site is located in an area that was previously used as an airport and would connect to existing PG&E utility lines in the project vicinity.

In 2018, PG&E reported total electricity consumption within its planning area of 44,932.58 million kilowatt-hours (kWh), or gigawatt-hours (GWh), with the majority of usage associated with commercial and industrial land uses.⁷

Between 2012 and 2018, total electricity use in Solano County was 25,634 gigawatt hours (GWh), with annual ranges of 3,193 GWh to 3,243 GWh⁸. Non-residential uses (industrial and commercial) make up approximately 60 percent of total usage each year and residential uses the remaining 40 percent.⁹ In this same timeframe, total natural gas consumption in Solano County was 1,607 million therms, with annual ranges between approximately 217 to 253 million therms per year. Non-residential uses were in the range of approximately 76 percent of the total annual consumption, while residential use were approximately 24 percent of total annual consumption.

a) *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Construction

The energy consumption associated with construction of the proposed project includes primarily diesel fuel consumption from on-road hauling trips and off-road construction diesel equipment, and gasoline consumption from on-road worker commute and vendor trips. Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning) would be powered by a generator. The amount of electricity used during construction would be minimal; typical demand would stem from the use of electrically powered hand tools and several construction trailers by managerial staff during the hours of construction activities. The majority of the energy used during construction would be from petroleum. This analysis relies on the construction equipment list and operational characteristics, as stated in Section 4.3 (Air Quality) and Section 4.8 (Greenhouse Gas Emissions). *Table 4: Project Energy Consumption During Construction* quantifies the construction energy consumption are provided for the Project, followed by an analysis of impacts based on those quantifications.

⁶ Pacific Gas and Electric, Exploring Clean Energy Solutions, https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page?WT.mc_id=Vanity_cleanenergy, accessed July 27, 2020.

⁷ California Energy Commission, Energy Consumption Data Management System. California Energy Consumption Database. Available at: <http://ecdms.energy.ca.gov/>. Accessed July 28, 2020.

⁸ California Energy Commission, Energy Consumption Data Management System. California Energy Consumption Database. Available at: <http://ecdms.energy.ca.gov/>. Accessed July 28, 2020.

⁹ California Energy Commission, Energy Consumption Data Management System. California Energy Consumption Database. Available at: <http://ecdms.energy.ca.gov/>. Accessed July 23, 2020.

Table 4: Project Energy Consumption During Construction

Source	Project Construction Usage	Solano County Annual Energy Consumption	Percentage Increase Countywide
Diesel Use	Gallons		
On-Road Construction Trips ¹	1,794	53,290,000	0.003%
Off-Road Construction Equipment ²	20,483		0.038%
Construction Diesel Total	22,277		0.042%
Gasoline	Gallons		
On-Road Construction Trips ¹	1,307	184,197,250	0.001%
1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2017 in Solano County. 2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (hp)-hour from USEPA. Abbreviations: CalEEMod: California Emission Estimation Model; EMFAC: Emission Factor Model 2017; kWh: kilowatt-hour; Sources: AWMA, 1992; DOE 2016; USEPA 1996.			

In total, construction of the proposed project is anticipated to consume approximately 22,277 gallons of diesel and 1,307 gallons of gasoline. The project’s fuel from the entire construction period would increase fuel use in the County by approximately 0.04 percent for diesel and less than 0.001 percent for gasoline.

There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest EPA and CARB engine emissions standards. These engines use highly efficient combustion engines to minimize unnecessary fuel consumption.

The CEQA Guideline Appendix G and Appendix F criteria requires the project’s effects on local and regional energy supplies and on the requirements for additional capacity to be addressed. A 0.04 percent increase in construction fuel demand is not anticipated to trigger the need for additional capacity. Fuel consumption is based on a conservative construction phasing and conservative estimates for annual construction fuel consumption. Longer phases would result in lower construction intensity and a lower annual fuel consumption, resulting in lower annual demand on energy supplies. Additionally, use of construction fuel would cease once the project is fully developed. As such, project construction would have a nominal effect on the local and regional energy supplies. Therefore, it is expected that construction fuel consumption associated with the project would not be inefficient, wasteful, or unnecessary. The project would not substantially affect existing energy or fuel supplies, or resources and new capacity would not be required. Impacts would be less than significant in this regard.

Operational

Energy use related to the proposed project would include energy directly consumed for special lighting, ventilation and air conditioning systems, as well as fuel usage from on-road vehicles. Quantifications of operational energy consumption are provided for the proposed project are provided in *Table 5: Annual Energy Consumption During Operations* below.

Table 5: Annual Energy Consumption During Operations

Source	Project Operational Usage	Solano County Annual Energy Consumption	Percentage Increase Countywide
Electricity Use	Megawatt Hour/Year (MWh/year)		
Area ¹	68	3,243,250	0.0021%
Natural Gas Use	Therms/year		
Area ¹	1,548	242,528,476	0.0006%
Diesel Use	Gallons/Year		
Mobile ²	901	53,290,000	0.0017%
Gasoline Use	Gallons/Year		
Mobile ²	3,983	184,197,250	0.0022%
Notes:			
1. The electricity and natural gas usage are based on project-specific estimates and CalEEMod defaults.			
2. Calculated based on the mobile source fuel use based on vehicle miles traveled (VMT) and fleet-average fuel consumption (in gallons per mile) from EMFAC2017.			
Abbreviations: CalEEMod: California Emission Estimation Model; EMFAC2017: California Air Resources Board Emission Factor Model; kBtu: thousand British Thermal Units; kWh: kilowatt-hour			

Operation of uses implemented pursuant to the proposed project would annually consume approximately 68 MWh of electricity, 1,548 therms of natural gas, 901 gallons of diesel, and 3,983 gallons of gasoline.

Pacific Gas and Electric (PG&E) provides electricity to the project area. The project site is expected to continue to be served by the existing PG&E electrical facilities. Total electricity demand in PG&E's service area is forecast to increase by approximately 12,000 GWh—or 12 billion kWh—between 2016 and 2028.¹⁰ The proposed projects anticipated electricity demand (approximately 68 MWh) would be nominal compared to overall demand in PG&E's service area. Therefore, the projected electrical demand would not significantly impact PG&E's level of service.

Regarding natural gas, Solano County consumed 242,528,476 therms of natural gas in 2018¹¹. Therefore, the project's operational energy consumption for space and water heating would represent 0.0006 percent of the natural gas consumption in the County.

In 2018, Californians consumed approximately 15,589,042,965 gallons of gasoline and approximately 3,107,823,655 gallons of diesel fuel. Solano County annual gasoline fuel use in 2019 was 184,197,250 gallons and diesel fuel use was 53,290,000 gallons. Expected project operational use of gasoline and diesel would represent 0.002 percent of current gasoline use and 0.002 percent of current diesel use in the County.

It should also be noted that the proposed project design and materials would comply with the 2019 Building Energy Efficiency Standards, which take effect on January 1, 2020, and/or future 2019 Building Energy Efficiency Standards depending on when construction permits are issued.

¹⁰ California Energy Commission, *California Energy Demand 2018-2030 Revised Forecast, Figure 49 Historical and Projected Baseline Consumption PG&E Planning Area*, April 2018.

¹¹ California Energy Commission, Energy Consumption Data Management System. California Energy Consumption Database. Available at: <http://ecdms.energy.ca.gov/>. Accessed July 28, 2020.

None of the project energy uses exceed one percent of Solano County use and project operations would not substantially affect existing energy or fuel supplies or resources. The proposed project would comply with applicable energy standards and new capacity would not be required. Impacts would be less than significant in this regard.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Project design and operation would comply with State Building Energy Efficiency Standards, appliance efficiency regulations, and green building standards. As discussed above, project development would not cause inefficient, wasteful and unnecessary energy consumption, and impacts would be less than significant. The County of Solano adopted a Climate Action Plan (CAP) in 2011 in order to help reduce energy consumption and GHG emissions to become a more sustainable community and to meet the goals of AB 32. The CAP outlines various measures and strategizes numerous methods on how the County's long-term vision can be achieved. The proposed project would be required to comply with existing regulations, including applicable measures from the CAP, or would be directly affected by the outcomes (vehicle trips and energy consumption would be less carbon intensive due to statewide compliance with future low carbon fuel standard amendments and increasingly stringent Renewable Portfolio Standards). Therefore, the proposed project would comply with existing State energy standards and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts would be less than significant in this regard.

Cumulative Impacts

As discussed above, the proposed project would not cause a new energy impact to occur. Therefore, the proposed project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed.

4.7 Geology and Soils

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?		X		
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems				X

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
where sewers are not available for the disposal of waste water?				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Geology and Soils

Discussion of Impacts

This section addresses the project sites suitability for use for indoor cannabis cultivation based on information related to geotechnical and soils conditions from information contained in the RVGP and state of California resources such as those provided by the California Department of Conservation (CDOC), California Geological Survey (CGS), and United States Geological Survey (USGS).

- a) *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

According to publicly available information, no faults are known to lie within the project site (City of Rio Vista, 2002 and CDOC, 2010). The City of Rio Vista General Plan (RVGP) notes that the Alquist Priolo Special Studies Zone Act focuses on surface fault rupture and not the potential of a particular location to experience seismically induced ground shaking. The RVGP notes that the City is not included within any special study area. The CDOC also provides mapping of Alquist Priolo zones and neither the City nor project site are shown in such an area (CDOC, 2020). Therefore, the likelihood of a surface fault rupture occurring on this site is considered low. Nonetheless, there are faults located in the general area including the Midland Fault Zone, located approximately two miles east of the project site and the Rio Vista Fault adjacent to the Sacramento River approximately 1.5 miles to the southwest. Therefore, the proposed project is not anticipated to be affected by fault rupture. In addition, the proposed project would be required to meet all existing earthquake safe design standards including the current California Building Code (CBC), Chapter 16, Section 1613, Earthquake Loads. As such, project implementation would have a less than significant impact in this regard.

ii. Strong seismic ground shaking?

The northern California region is characterized by numerous earthquake faults and is recognized to experience seismic ground shaking. The majority of faults are located west of the project site in and around the San Francisco Bay area. The project's most significant seismic hazard is seismic shaking from the Midland Fault Zone or Rio Vista Fault discussed in i), above. Due to their proximity to the project site, activity could result in substantial shaking should fault movement occur. Seismic ground shaking also may occur from activity on other regional faults, notably, the Hayward Fault and San Andreas Fault located approximately 38 miles and 55 miles to the west, respectively.

Potential impacts from seismic ground shaking would be reduced through compliance with Section 15.04.030 California Codes Adopted to the City's Municipal Code. This section of code states that primary and secondary codes of the CBC are adopted and incorporated into the codes of the City by reference, and have the same legal effect as if they were written as part of the City code. Both Volumes 1 and 2 of the 2016 CBC are included and both discuss requirements related to structural design, potential loading from earthquakes, soils and structural designs, and other measures and prescriptions to reduce effects of strong seismic ground shaking (CBC, 2016).

Section 13.24.060 in Chapter 13.24 related to grading approval requires permit be issued after approval from the director. Section 13.24.090 Conditions of grading approval, among other requirements would not provide for grading approval unless the proposed project conforms with the RVGP (listed below), any adopted specific or community plans, and applicable city ordinances, including the zoning ordinance and the subdivision ordinance.

The RVGP notes that safety related to seismicity, flooding, grading, and drainage are of concern and that all development proposal would be referred to the Building Department, Public Works Department, and City Engineer to address potential geologic impacts. The RVGP goes on to state that the applicant to provide specific data requirements pertaining to potential hazards, including slope instability and seismicity and will be used by the City to determine the permitted level of development of a given site.

Therefore, compliance with these standard building and plan check criteria, and other sections of the CBC listed above, would ensure all needed structural designs and other measures would be in place prior to the issuance a building permit and would reduce impacts associated with ground shaking to less than significant.

iii. Seismic-related ground failure, including liquefaction?

Liquefaction describes the phenomenon where soil loses its supportive strength and becomes incapable of bearing the load or overlying soils or structures. Liquefaction occurs during earthquake conditions in saturated, relatively loose, sandy soils located near the ground surface. The RVGP notes that the potential for liquefaction in the City is not high, but depending on subsurface conditions could occur. Accordingly, there is the potential for liquefaction at the project site during a strong earthquake or other seismic ground shaking if unconsolidated sediments and a high-water table exist. According to the CDOC Earthquake zones of required investigation maps, the project site and City have not been evaluated for liquefaction potential.

As discussed in ii) above, the proposed project would be referred to the Building Department, Public Works Department, and City Engineer to address potential geologic impacts, which would include

liquefaction. During this process, including plan review, the proposed project would be reviewed to ensure compliance with the CBC in conformance with Section 15.04.030 California Codes adopted to the City's Municipal Code. This would ensure that all proposed structures would be built to conform to all applicable building standards and impacts associated with liquefaction would be less than significant.

iv. Landslides?

The project site is flat and slopes slightly to the south falling less than one foot over a distance of approximately 180 feet. The project site is not located adjacent to any area with steep terrain, any hillsides, or other area with slopes that would be subject to landslides. No impact would result in this regard. In addition, the project site does not contain any rock outcroppings and there is no potential for the project site to be affected by rockfall from off-site areas. As such, the project site would not expose people or structures to the effects of landslides from either on-site or from off-site locations and impacts would not occur.

v. Result in substantial soil erosion or the loss of topsoil?

The project site is generally flat, and as discussed in iv), above, the project site elevation changes a total of less than one foot over a distance of approximately 180 feet. According to the United States Department of Agriculture (USDA) websoil survey, the proposed project is located on Tujunga fine sand. This soil is typically found at elevations from 0-40 feet, can be located in floodplains, and is formed from mixed dredged alluvium. The soil consists of fine sand and sand is classified as excessively drained, the runoff class is negligible, and water storage in the profile is very low (USDA, 2020).

Grading of the project site would not require the creation of sloped areas that would be potentially subject to erosion. However, minor grading over the approximate 1.24-acre site would result in temporary barring of the soil when the upper layer of vegetation is removed and for the removal and replacement/recompaction of soils and fill materials to create the building pad(s) and achieve appropriate site elevations. In addition, at times, soil may be stockpiled on-site to enable proper mixing of soil and these piles would be subject to potential erosion as a result of wind and rain.

The proposed project would be required to comply with Section 13.20.100 Reduction of pollutants in stormwater of the City's Zoning Code. This section requires that any person engaged in activities which may result in pollutants entering the storm water conveyance system shall, to the maximum extent practicable, undertake the measures in the code to reduce the risk of non-storm water discharge and/or pollutant discharge. In addition, the code specifically states that any person or business holding an NPDES general or individual storm water permit is not exempt from compliance to the local storm water regulations. This code section further defines requirements related to implementation of a Stormwater Pollution Prevention Plan (SWPPP).

In accordance with the listed standard permitting requirements and to reduce the potential for soil erosion and loss of topsoil, the proposed project would comply with the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit (No. 2012-0006-DWQ) during construction. Under the NPDES, the SWPPP is required for construction activities that would disturb an area of one acre or more. The SWPPP would identify potential sources of erosion or sedimentation as well as identify and implement Best Management Practices (BMPs) that reduce erosion. Typical BMPs intended to control erosion include sandbags, silt fences, covering stockpiles, retention

basins, silt fencing, street sweeping, etc. These measures would reduce the potential for eroded materials to affect downstream receiving waters.

Once constructed, the proposed project would include both impermeable surfaces including concrete and other hardscape used in parking lots, driveways, and walkways, and permeable surfaces such as landscaped areas. The City Municipal code also includes requirements for long-term post construction discharges to prevent pollutants from entering the stormwater conveyance system and ensures comply with all applicable, federal, state, and local laws, ordinances, and regulations. Long term controls specifically include source control measures including low impact design (LID) and hydromodification management to prevent pollution of stormwater and provide for pre-treatment to remove pollutants from stormwater.

Development of the proposed project would occur on an approximate 1.24 acres site and while it would not cover an expansive area, it could create conditions where surface soils would be exposed to wind and water erosion. Conformance to all listed requirements would prevent substantial soil erosion and ensure impacts are less than significant.

b) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

As discussed above, the project site is flat with very little topographic relief, is not located adjacent to any hillsides or other sloped areas and is not subject to landslides. Lateral spreading typically results when ground shaking moves soil toward an area where soil integrity is weak or unsupported. Lateral spreading typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Liquefaction is a mode of ground failure that results from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose sandy soils or non-plastic fine-grained soils exist below groundwater. The California Geologic Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones. These are areas considered at a risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table.

While the RVGP notes that liquefaction potential in the City is not high, based on other studies in the vicinity, depth to groundwater can be approximated to 24 feet below ground level. Based on this water level and other sedimentary layers potentially occur under the project site, the liquefaction potential is considered to be moderate and mitigation would be required in this regard.

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. The project does not propose pumping of any water, oil, and/or gas from underground reservoirs. In addition, the site was not used for mining and there are no mines near the project site. These features minimize the likelihood of land subsidence.

Collapse can occur if near-surface soils vary in composition both vertically and laterally. Strong ground shaking from earthquakes can cause non-uniform compaction of the soil strata, resulting in movement of the near-surface soils and collapse.

The proposed project would be required to conform with the requirements set forth in the City of Rio Vista Municipal Code as detailed in the above sections. This would include approval of grading plans, which would consider existing soils, existing grades, depth to groundwater, and the potential for the site to experience instability. In addition, adherence to all applicable regulations and conformance to applicable building codes added to the proposed Project as conditions of approval would ensure impacts less than significant.

Level of Significant After Mitigation: Impacts would be less than significant.

c) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils generally are associated with silt and clay soils that are subject to shrinking and swelling due to the large pore volume and the fact they are subject to large changes in moisture content during dry and wet periods. The shrinking and swelling of soils can cause damage or failure of foundations, utilities, and pavements. During periods of high moisture content, expansive soils under foundations can heave and result in structures lifting. In dry periods, the same soils can lose strength, collapse, and result in settlement of structures.

According to the USDA websoil survey, the proposed project is located on Tujunga fine sand, which is excessively drained, and has a very low water storage profile. These are not characteristics of expansive soils. In addition, other studies in the area have found near surface soils consist of loose to medium dense sand with various amounts of silt. These near surface soil layers were underlain by varying interbedded layers of silt with varying levels of sand and sand with various amounts of silt. These soil conditions do not lend themselves to expansion.

To further ensure expansive soils are not present, the project sites grading plan would be evaluated by the City Engineer prior to project approval. This would ensure expansive soils are not present, or if they are, proper soil mixing and compaction is undertaken to reduce potential effects. This would ensure that all soils are appropriately mixed and compacted and impacts in this regard would be less than significant.

d) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed project would tie into the existing wastewater treatment system and wastewater would be treated at the Beach treatment plant. The proposed project does not require, nor does it propose use of a septic system or alternative wastewater disposal system. Therefore, no impacts would occur.

e) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources are typically found in geologic strata that was deposited during the Pleistocene Epoch which includes the time between 2.6 million years ago until approximately 11,700 years ago. The Holocene Epoch began about 11,700 years ago and consists of younger sedimentary deposits. Due to the

younger age of these materials fossils are considered less likely to be found. Because the project site is within the Sacramento River basin and is overlain by generally young sediment, it is unlikely that grading and excavation would inadvertently unearth unknown paleontological resources.

Nonetheless, there is a possibility that future ground-disturbing activities could uncover and cause damage to, or the destruction of, previously undiscovered paleontological resources or unique geologic features. Implementation of **MM GEO-1** would reduce potential impacts to a less-than significant level. **MM-GEO-1** would require notification of a qualified paleontologist if during initial site disturbance and excavation activities paleontological resources are uncovered. As part of the mitigation, a resource recovery plan would be implemented, and this would reduce impacts to less-than-significant.

MM GEO-1: If any paleontological resources are encountered during ground-disturbance activities, all work within 25 feet of the find shall halt until a qualified paleontologist is able to evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the local or regional Natural History Museum or other appropriate facility regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance will not be required. If the resources are significant, they shall be avoided or recovered such that potential damaging effects are mitigated. Construction in that area shall not resume until approval of the qualified paleontologist and City are given. If the fossil is recovered the fossil shall be deposited in an accredited and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

Cumulative Impacts

Geology and soil-related impacts are generally site-specific and are determined by a particular sites soil characteristics, topography, and proposed land uses. Development projects are analyzed on an individual basis and must comply with established requirements of the applicable jurisdiction's development requirements and the CBC as they pertain to protection against known geologic hazards and potential geologic and soil-related impacts.

Cumulative effects related to geology resulting from the implementation of future development of the proposed project as well as surrounding areas could expose more persons and property to potential impacts due to seismic activity. Long-term impacts related to geology include the exposure of people to the potential for seismically induced ground shaking. Implementation of other cumulative projects would incrementally increase the number of people and structures subject to a seismic event. Seismic and geologic significance is considered on a project-by-project basis through the preparation of design-level geotechnical studies. The potential for any project to be affected by or any project to exacerbate and existing geotechnical hazard would be minimized or not occur through strict engineering guidelines as they pertain to protection against known geologic hazards and potential geologic and soil-related impacts.

Development the proposed project as well as all past, present, and future projects would be required to be constructed in accordance with the latest edition of the CBC and to adhere to all current earthquake construction standards, including those relating to soil characteristics set forth by the City. Therefore, no elements of the proposed would contribute to any cumulatively considerable geologic and/or soils impacts. Therefore, cumulative effects of increased seismic risk would be less than significant.

4.8 Greenhouse Gas Emissions

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

The Greenhouse Gas (GHG) Emissions section is primarily based on information, guidance, and analysis protocol provided by the Yolo-Solano Air Quality Management District (YSAQMD). In addition, the section utilizes information obtained from the County of Solano Climate Action Plan¹², and the California Emissions Estimator Model (CalEEMod) version 2016.3.2.

The proposed project’s GHG emissions would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with new vehicular trips and indirect source emissions, such as electricity usage for manufacturing equipment.

Addressing GHG generation impacts requires an agency to make a determination as to what constitutes a significant impact. 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 if a project’s GHG emissions would 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 development’s GHG emissions (14 CCR Section 15064.4[a]). Determining a threshold of significance for climate change impacts poses a special difficulty for lead agencies. Much of the science in this area is new and is evolving constantly. At the same time, neither the State nor local agencies are specialized in this area, and there are currently no local, regional, or state thresholds for determining whether a residential development has a significant impact on climate change. The CEQA Amendments do not prescribe specific significance thresholds but instead leave considerable discretion to lead agencies to develop appropriate thresholds to apply to projects within their jurisdiction.

¹² County of Solano. *Solano County Climate Action Plan*. February 2010.

Assembly Bill (AB) 32 is a legal mandate requiring that statewide GHG emissions be reduced to 1990 levels by 2020. In adopting AB 32, the legislature determined the necessary GHG reductions for the State to sufficiently offset its contribution to cumulative climate change to reach 1990 levels. AB 32 is the only legally mandated requirement for the reduction of GHGs. As such, compliance with AB 32 is the adopted basis on which the agency can base its significance threshold for evaluating GHG impacts.

Senate Bill 32 (SB 32), signed into law in September 2016, codifies a GHG reduction target of 40 percent below 1990 levels by 2030 and authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions. With SB 32, the California Legislature passed companion legislation AB 197, which provided additional direction for developing an updated Scoping Plan. CARB released the second update to the Scoping Plan to reflect the 2030 target set by SB 32 in November 2017.

Additionally, 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.

Various local, regional, State and federal agencies share the responsibility for air quality management in Yolo County. The YSAQMD operates at the local level and is tasked with enforcing the implementation of federal and State programs and regulations. The YSAQMD works jointly with the USEPA, CARB, SACOG, other air districts in the region, county and city transportation and planning departments, and various non-governmental organizations to work towards improving global climate change through a variety of programs. Programs include the adoption of regulations, policies and guidance, extensive education and public outreach programs, as well as emission reducing incentive programs.

Nearly all development projects in the region have the potential to generate air pollutants that may increase global climate change. Therefore, for most projects, evaluation of air quality impacts is required to comply with CEQA. The YSAQMD has not adopted thresholds of significance for GHG emissions. In absence of thresholds of significance, the YSAQMD is currently recommending GHG analysis consistent with Sacramento Metropolitan Air Quality Management District (SMAQMD) approach.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Short-Term Construction Greenhouse Gas Emissions

Construction of the proposed project would result in direct emissions of CO₂, N₂O, and CH₄ from the operation of construction equipment and the transport of materials and construction workers to and from the project site.

Several State-led GHG emissions-reducing regulations have recently taken effect, and changes to regulations will continue to take effect in the near future that will substantially reduce GHG emissions. For instance, implementation of Assembly Bill 1493 (the Pavley Standard) (Health and Safety Code Sections 42823 and 43018.5) will significantly reduce the amount of GHGs emitted from passenger vehicles. The Pavley Standard is aimed at reducing GHG emissions from noncommercial passenger vehicles and light-duty trucks of model years 2009–2016 by requiring increased fuel efficiency standards of automobile manufacturers. The program combines the control of smog, soot, and GHG emissions with

requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

The electricity provider for the City of Rio Vista, Pacific Gas and Electric Company (PG&E), is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020, which will have the effect of reducing GHG emissions generated during energy production. As of 2017, Pacific Gas and Electric's (PG&E) power mix was at 33 percent renewable energy¹³ and will be required to achieve the 60 percent renewable energy goal by 2030 established by SB 100.

The proposed project would result in direct GHG emissions from construction and operation related activities. Total GHG emissions generated during construction are presented in *Table 6: Construction Greenhouse Gas Emissions*. The CalEEMod outputs are contained within the Appendix A, Air Quality and GHG Data.

Table 6: Construction Greenhouse Gas Emissions

Construction Year and Season	CO ₂ e Emissions, metric tons/year
2020	67
2021	169
Total	236
Emissions amortized over 30 years	8
Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.	

As shown in *Table 6*, project construction-related activities would generate approximately 236 MTCO₂e of GHG emissions over the course of construction. One-time, short-term construction GHG emissions are typically summed and amortized over the project's lifetime (assumed to be 30 years). It is reasonable to look at a 30-year time frame for buildings since this is a typical interval before a new building requires the first major renovation. The amortized project emissions would be approximately 8 MTCO₂e per year. Once construction is complete, the generation of construction related GHG emissions would cease.

YSAQMD does not have a threshold for construction GHG emissions, which are one-time, short-term emissions and therefore would not significantly contribute to long-term cumulative GHG emissions impacts of the proposed project. In absence of thresholds of significance, the YSAQMD is currently recommending GHG analysis consistent with SMAQMD approach. Emissions from construction are below the SMAQMD construction phase threshold of 1,100 MTCO₂e/year. Therefore, project construction GHG impacts are less than significant.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions occur over the life of a project. The project proposes buildings that would house businesses that produce goods for consumers and distributors, characteristic of an industrial operation. Operational GHG emissions would also result from indirect sources, such as off-site generation

¹³ California Energy Commission, *2017 Power Content Label*, July 2018.

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 proposed project are summarized in *Table 7: Project Greenhouse Gas Emissions*. As shown in *Table 8*, the Project would generate approximately 69 MTCO₂e annually from both construction and operations.

Table 7: Project Greenhouse Gas Emissions

Emissions Source	MTCO ₂ e ¹ per Year
Construction (amortized over 30 years)	8
Area	> 0.001
Energy	14
Mobile	40
Waste	3
Water	4
Total Annual Project GHG Emissions²	69
<i>Threshold³</i>	1,100
<i>Exceed Threshold?</i>	No
Note: ¹ Emissions were calculated using CalEEMod version 2016.3.2. ² Total values are from CalEEMod and may not add up due to rounding. ³ YSAQMD does not have a GHG operational threshold, therefore SMAQMD and BAAQMD threshold of 1,100 MTCO ₂ e was utilized. Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.	

Table 7 shows that the proposed project would result in approximately 69 MTCO₂e per year from amortized construction, area, energy, mobile, waste, and water usage. YSAQMD does not have a GHG threshold, therefore the neighboring SMAQMD threshold of 1,100 MTCO₂e was utilized. The proposed project would not exceed the numeric threshold of 1,100 MTCO₂e. Thus, the proposed project would have a less than significant impact with respect to GHG emissions. In addition, with continued implementation of various statewide measures, the proposed project's operational energy and mobile source emissions (approximately 89 percent of total project emissions) would continue to decline in the future. GHG operational emissions would be less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Solano County Climate Action Plan

In 2011, the County of Solano adopted its Climate Action Plan (CAP). The CAP provides additional guidance for the County's ongoing efforts to reduce GHG emissions. The CAP contains policies/goals related to agriculture, energy, transportation/land use, waste, and water.

Goals in the section on energy focus on increasing energy efficiency and increasing the usage of renewable sources. Actions include implementing green building ordinances and programs, community outreach, renewable energy policies, and partnerships with local energy producers.

The CAP identifies the County’s emissions at 960,000 MTCO₂e per year. The CAP establishes a communitywide emissions reduction goal of 20 percent below 2005 levels by 2020. This goal is more aggressive than the State’s reduction goal. The CAP identifies numerous GHG reduction measures in the agriculture, transportation and land use, energy use, water use, and solid waste sectors.

The proposed project would help implement the goals set forth in the CAP improving energy efficiency of existing and new buildings within the County as well as improving energy efficiency if the County’s infrastructure operations.

California Air Resource Board Scoping Plan Consistency

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (CO₂, CH₄, NO_x, HFCs, PFCs, and SF₆) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, CARB adopted the *Climate Change Scoping Plan* (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan 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. As shown in *Table 8: Project Consistency with Applicable CARB Scoping Plan Measures*, the proposed project is consistent with most of the strategies, while others are not applicable to the proposed project.

The 2017 Scoping Plan Update identifies additional GHG reduction measures necessary to achieve the 2030 target. These measures build upon those identified in the first update to the Scoping Plan 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 such, impacts related to consistency with the Scoping Plan would be less than significant.

Table 8: 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

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
			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 proposed 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 proposed project would be required to comply with the Pavley emissions standards.
		2012 LEV III California GHG and Criteria Pollutant Exhaust and Evaporative Emission Standards	Consistent. The LEV III amendments provide reductions from new vehicles sold in California between 2017 and 2025. Passenger vehicles 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 proposed project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the proposed 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 proposed 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 proposed 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 proposed project would not conflict with implementation of this measure. Medium and heavy-duty vehicles associated with construction and operation of the proposed 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 proposed project would not conflict with implementation of this measure. The proposed 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 proposed project would obtain electricity from the electric utility, PG&E. PG&E obtained 33 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		

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
		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 proposed project would comply with the CalGreen standards, which requires a 20 percent reduction in indoor water use.
		SBX 7-7—The Water Conservation Act of 2009	
		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 proposed project would implement required green building strategies through existing regulation that requires the proposed project to comply with various CalGreen requirements. The proposed 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 ₂ e 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, mobile source emissions make up the majority of emissions and project stationary source GHG emissions would not exceed 10,000 MTCO ₂ e. Therefore, this regulation would not apply.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards	Consistent. The proposed project would not conflict with implementation of these measures. The proposed 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 proposed project is in an area designated for urban uses. No forested lands exist on-site.
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 proposed 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. The proposed project site is designated for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the proposed project.
Source: California Air Resources Board, <i>California's 2017 Climate Change Scoping Plan</i> , November 2017 and CARB, <i>Climate Change Scoping Plan</i> , December 2008.			

The proposed project is estimated to result in approximately 64 MTCO₂e per year, therefore the GHG emissions caused by long-term operation of the proposed project 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 proposed project would benefit from the implementation of current and potential future regulations (e.g., improvements in vehicle emissions, SB 100/renewable electricity portfolio improvements, etc.) enacted to meet an 80 percent reduction below 1990 levels by 2050.

The proposed project demonstrates consistency with the Solano County CAP and Scoping Plan goals, and would not conflict with any applicable plan, policy, or regulation of an agency adopted to reduce GHG emissions, including Title 24, AB 32, and SB 32. Therefore, project impacts would be less than significant.

Cumulative Impacts

As discussed above, the proposed project would not cause a new greenhouse gas impact to occur. Therefore, the proposed project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed.

4.9 Hazards and Hazardous Materials

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
e) For a project located within 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 result in a safety hazard or excessive noise for people residing or working in the project area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Hazardous materials are listed by federal, State, or local agencies, based on the materials characteristics and its potential to cause harm or damage. A hazardous material is defined by the California Code of Regulation (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). Hazardous materials are commonly used in commercial and industrial applications and, to a limited extent, in residential areas.

Both the US Environmental Protection Agency (EPA) and the US Department of Transportation (DOT) regulate the transport of hazardous waste and material, including transport via roadways and highways. The EPA administers permitting, tracking, reporting, and operational requirements established by the Resource Conservation and Recovery Act (RCRA). The DOT regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act (HMTA). The HMTA administers container design and labeling, and driver training requirements. These established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste. Additionally, state and local agencies, enforce the application of these acts and provide coordination of safety and mitigation responses in the case that accidents involving hazardous materials occur.

Construction Impacts

Construction for the proposed project would include removal of upper layers of soil and vegetation, excavation, grading, pouring of concrete and laying of asphalt, followed by construction of the proposed structure, exterior storage buildings, and installation of interior elements. Heavy equipment would be used and would entail refueling and potential maintenance and repairs. These activities could lead to minor spills of fuels, oils, and lubricants. The use and handling of hazardous materials during construction would occur in accordance with applicable federal, state, and local laws, including California Occupational Health and Safety Administration (Cal/OSHA) requirements. All construction activities would be subject to the National Pollutant Discharge Elimination System (NPDES) permit process that requires the preparation of a stormwater pollution prevention plan (SWPPP). The SWPPP would be reviewed and approved by the CVRWQCB and the City prior to issuance of any grading or building permits.

Construction also could require the transport and use of small amounts of liquid waste, including cleaning fluids, dust palliative, herbicides, and solvents. Some solid hazardous waste, such as welding materials and dried paint, may also be generated during construction. These materials would be transported to the project site during construction, and any hazardous materials that are produced as a result of the construction of the project would be required to be collected and transported away from the site for safe disposal. During construction of the project, material safety data sheets for all applicable materials present at the site would be made readily available to onsite personnel. During construction activities, nonhazardous construction debris would be generated and disposed of in local landfills. Sanitary waste would be managed using portable toilets located at a reasonably accessible onsite location. Conformance to all applicable regulations and laws related to hazardous materials during construction would reduce impacts in this regard to less than significant.

Operational Impacts

The proposed project involves a volatile extraction process using butane, propane, and ethanol. The proposed project will receive, store, and use these liquefaction materials on-site for the extraction process. No enrichment using carbon dioxide (CO₂) is proposed. The gasses will be stored in metal canisters within an enclosed and lockable detached storage area on the easterly side of the main structures. The gasses are flammable and combustible, and would be pressurized to a liquid state until used. Both the main structure and storage area will have, as required, gas detection equipment with sensors and alarms.

The volatile extraction process involves the use of specialized equipment including booths and a walk-in hood with separate air circulation system to ensure that workers and other interior areas of the structure are not exposed to potentially hazardous materials or gasses used or created during the extraction process. The hood would be used for the post extraction process and within the hood would use alcohol and pentane and would have a gas monitoring system, an exterior control panel to monitor activities, warning and hazardous materials labels, and an interior fire extinguisher and work area. The hood is designed by Advanced Extraction Labs and would comply with all applicable state and local codes.

Two booths for extraction would be used and they would feature a split system fan/coil, modular extraction platform (mep) heaters and chillers, booth exhaust, mep extraction equipment, a work area, booth supply air, an outside air intake, and split system compressor. As part of the extraction process, a series of separation and distillation processes that would produce both wanted materials and products as well as waste materials. Solvents and gases would be used and then distillates would be separated and restored in containers and other secure storage media such as metal cylinders. All waste materials would be stored and disposed of according to the CDPH and other regulations pertaining to hazardous materials storage, handling, and disposal.

The transport use and storage of hazardous materials would be required to comply with all applicable State and federal regulations, such as requirements that spills would be cleaned immediately, and all wastes and spills control materials would be properly disposed of at approved disposal facilities. Enforcement of hazardous material regulations, building codes and rapid response by local agencies would reduce the project's hazardous materials transportation, use, and disposal health hazards to a less than significant impact.

- b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Both the US Environmental Protection Agency (EPA) and the US Department of Transportation (DOT) regulate the transport of hazardous waste and material, including transport via highway. The EPA administers permitting, tracking, reporting, and operations requirements established by the Resource Conservation and Recovery Act (RCRA). As discussed above, the DOT regulates the transportation of hazardous materials through implementation of the HMTA. This act dictates container design and labeling, and driver training requirements. These established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste. Additionally, state and local agencies enforce the application of these acts and provide coordination of safety and mitigation responses in the case that accidents involving hazardous materials occur.

Construction Impacts

As discussed in a) above, construction of the proposed project would include refueling and could require minor maintenance of construction equipment on-site. This could lead to minor fuel, oil, and lubricant spills. The use and handling of hazardous materials during construction would occur in accordance with applicable federal, state, and local laws, including California Occupational Health and Safety Administration (Cal/OSHA) requirements. All construction activities would be subject to the National Pollutant Discharge Elimination System (NPDES) permit process that requires the preparation of a stormwater pollution prevention plan (SWPPP), which would be reviewed and approved by the RWQCB. Conformance to applicable requirements would reduce impacts to less than significant in this regard.

Operational Impacts

The maintenance and operation of the proposed project, it would involve the transport, use, and disposal of hazardous materials needed for the extraction process. This would include the use of and pressurized gasses including butane, propane, and ethanol and would require the applicant to obtain all appropriate permits from CDFA or BCC. All required permitting conditions related to the safe handling and use of the chemicals would be followed as verified by the agencies and/or City. As discussed in b) above, enforcement of hazardous material regulations, building codes and rapid response by local agencies would reduce the project's hazardous materials transportation, use, and disposal health hazards to a less than significant impact.

- c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

There are no schools within 0.25 miles of the proposed project. The nearest school is DH White Elementary School which is operated by the River Delta Unified School District (RDUSD) located greater than one mile to the west (RDUSD, 2020). No impacts would occur.

- d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

The proposed project is not located on a site listed pursuant to Government Code Section 65962. An online search of the SWRCB GeoTracker website, the Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site List on the EnviroStor website (DTSC, 2020), which revealed there are no hazardous waste sites on the Cortese List in the City of Rio Vista. Therefore, The proposed project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would therefore not create a significant hazard to the public or the environment.

e) For a project located within 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 result in a safety hazard or excessive noise for people residing or working in the project area?

The proposed project is on the site of the former Rio Vista Municipal Airport. The airport is no longer functional and is the subject of reuse and redevelopment efforts. The proposed project is located approximately 1.5 miles south of the current Rio Vista Municipal airport located adjacent to the eastern right-of-way of Airport Road. The main runway of the new airport is oriented east to west for approaches and takeoff. The secondary runway trends generally north to south.

The proposed project is not located within any of the Safety Zones prescribed in the City of Rio Vista Municipal Airport Land Use Compatibility Plan (RVALUCP). The RVALUCP discusses the runway protection zones (RPZs) surrounding the runways. The dimensions of the RPZs are set in accordance with FAA criteria. The airport is divided into seven zones including the Primary Surface Zone; Zone 1 – Runway Protection Zone; Zone 2- Inner Approach/Departure Zone; Zone 3- Inner Turning Zone; Zone 4 – Outer Approach/Departure Surface; Zone 5 – Sideline Zone; and Zone 6 – Traffic Pattern Zone. The Traffic Pattern Zone is the outermost zone and encircles the entire airport and all the other zones(Solano County, 2018).

The FAA also criteria sets forth requirements related to General Standards in terms of land use; Noise Criteria that sets noise contours; Safety Criteria that defines allowable structures and storage of hazardous materials; Airspace Protection Criteria the defines allowable structure heights and visual obstructions; and Avigation Easements for flight path right-of-way.

The proposed project consists of a single-story structure and would not impede or interfere with any airport operations. The proposed project is located approximately 0.5 miles south of Zone 6 (the outmost zone). No impacts would occur, and mitigation is not required.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City maintains a comprehensive Emergency Management Plan, which addresses interagency coordination, emergency functions, continuity of government responsibility, and public awareness. In addition, the plan provides for the operation of emergency services, defines transportation alternatives and City evacuation procedures approved by the State Office of Emergency Services (OES).

The proposed project would be accessible to emergency ingress and egress via two access driveways. From outside the airport reuse area the project site would be accessible via Airport Road and using the interior circulation system, which was designed and constructed in accordance with City standards. The

project site is not located on or adjacent to any major roadways used for emergency evacuation and would not encroach on or obstruct any existing evacuation route. The proposed project would be compliant with existing fire codes and ordinances regarding emergency access, this would be verified during the planning review process.

The proposed project would not interfere with the operation of any roads, nor result in road closures during project construction. The proposed project would not require any detours or conflict with emergency access. Therefore, the proposed project would not impede or conflict with any adopted emergency response or evacuation plans and no impact would occur.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project site is not located in an area identified as having a high potential for wildland fire. The project site consists of bare ground and upland and ruderal vegetation. The project site is surrounded by similarly vegetated undeveloped areas and industrial structures. The California Department of Forestry and Fire Protection (CALfire) Draft Fire Hazard Severity Zones in Local Responsibility Areas shows the project within an unzoned LRA area. Due to the existing site conditions and relative urbanized nature of the former airport site and surrounding areas, the proposed project would not expose people or structures to a substantial risk from wildland fires. Impacts would be less than significant, and mitigation is not required.

Cumulative Impacts

The proposed project would store and use all hazardous potentially materials in accordance with all applicable safe handling requirements. As discussed above, the proposed project involves cannabis extraction process which use ethanol, butane, and propane. All materials would be appropriately stored and moved within the facility and use would occur within hoods and booth designed to manage any fumes or vapors during the extraction processes. All other potentially hazardous materials such as fuels, lubricants, and cleaning agents are common use items and do not represent a substantial hazardous materials risk. All project related construction would be conducted in accordance with applicable standards and safe handling procedures. Other projects that would occur within the vicinity and as part of the reuse and redevelopment efforts airport also would have to conform to these same requirements. These projects would be the same general distance from the new airport, would occur interior to the redevelopment area, would conform to applicable standards, and also would undergo the planning and review process prior to any approval by the City. Therefore, taken in conjunction with past, present, and reasonably foreseeable projects, the proposed project would not make a cumulatively considerable contribution to hazards and hazardous material impacts. Impacts would be less than significant.

4.10 Hydrology and Water Quality

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:		X		
i. Result in substantial erosion or siltation on- or off-site?		X		
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?			X	
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X		
iv. Impede or redirect flood flows?			X	

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

The Sacramento River Basin lies between the Sierra Nevada and Cascade Range to the east and the Coast Range and Klamath Mountains to the west. Source waters start in northern California from the Upper Sacramento, McCloud, and Pit rivers, which join at Lake Shasta. From Lake Shasta the Sacramento River flows south and west where it receives additional flows from numerous small and moderate-sized tributaries including the American River which flows through Sacramento and past Rio Vista. The mouth of the Sacramento River is at Suisun Bay near Antioch, where it combines with the San Joaquin River and ultimately flows to the San Francisco Bay and into the Pacific Ocean.

Waterflows from Rio Vista to the Sacramento River are via interior drainages and surface flows to stormwater drainage facilities. There are two main drainages within the City. Both have been modified from their original form due to development and past agricultural uses. This includes the intermittent stream shown on USGS topographic maps known as “Industrial Creek” that flows through the main “valley” and bisects the Esperson and Riverwalk properties approximately 1.5 miles southwest of the project site. The Watson stream basin flows through the Brann and Gibbs properties northwest of the project site along the westerly side of the business park area 0.3 miles west of the project site (City of Rio Vista, 2002).

The responsibility of protecting the quality of surface and groundwater of this region is that of the Central Valley Regional Water Quality Control Board (CVRWQB). To support its objective, the CVRWQB adopts a Basin Plan which contains water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives. In part this is done through the antidegradation policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. In part, this states, “Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.”

Urban runoff and other non-point source discharges are regulated by the 1972 federal Clean Water Act, through the National Pollutant Discharge Elimination System (NPDES) permit program established by the US Environmental Protection Agency (EPA). The NPDES stormwater permit program is organized in two different phases, depending on where the stormwater discharges originate.

Specifically related to Construction stormwater, the Construction Stormwater General permit relates to project that disturb greater than one acre of soils. These projects are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

Clean Water Act Section 404 Permit and the Section 401 permit are involved if a project would discharge dredged or fill material in navigable waters or wetlands. The 404 permit is issued through the United States Army Corps of Engineers (USACE) and would be reviewed by the CVRWQB to ensure that discharge would not violate water quality standards.

Other water quality issues managed by the CVRWQCB, include Waste Discharge permits to the land. This includes wastewater discharged by on-site wastewater treatment systems such as septic systems and leach fields. Specific to cannabis, irrigation runoff, water treatment effluent, cleaning agents, and wash waters are of particular concern if the discharges of these wastewaters are to an on-site wastewater system. Such systems must obtain separate regulatory authorization, such as waste discharge requirements (WDRs), a conditional waiver of WDRs, or other permit mechanism, prior to discharge.

The CVRWQCB regulates projects that could require dewatering, and if the water would be discharged to land. In such an instance, coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the CVRWQB Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085 would be required.

The City's consideration related to post construction water quality is reflected in the Phase I and II Municipal Separate Storm Sewer System (MS4) permits. These permits require the Permittees (typically a city or other local jurisdiction) to reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

The City of Rio Vista has adopted a storm water management ordinance that is intended to protect and promote the health, safety and general welfare of the citizens of the city by controlling non-storm water discharges. Stormwater Management Ordinance is contained in Title 132, Chapter 13.20 – Storm Water Management and is intended to assist in the protection and enhancement of the water quality of watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Federal Water Pollution Control Act (Clean Water Act, 33 USC, Section 1251 et seq.), Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.), the National Pollutant Discharge Elimination System (NPDES), and the California General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4). (Ord. 009-2014 § 1) (City of Rio Vista, 2010). Because of the size and population of the City, the Phase II MSR requirements would be applicable.

The applicable regulations discussed above that related to the proposed project are discussed in further detail below. It should be noted that not all of the permits that could be required of a particular project, would be needed for the proposed project. Accordingly, the proposed project does not propose to use an on-site wastewater disposal system; the proposed project would not require a dewatering permit; and would not impact any 401 or 404 waters.

a) *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Construction Related Discharges

The proposed project includes ground disturbance that would remove vegetation resulting in bare soil, excavation and grading (cut and fill), potential for stockpiling soils, and construction-related activities that would involve the use of materials such as vehicle fuels, lubricating fluids, and solvents. These activities could result in soil erosion or siltation and subsequent water quality degradation offsite if runoff, or runoff containing sediments or other pollutants from spills are discharged from the site.

Because the proposed project would disturb more than one acre of land, the proposed project would be required to comply with the requirements of the NPDES General Permit. Permitting conditions helps control water pollution by regulating point source and non-point sources that could discharge pollutants into receiving waters. The City of Rio Vista is within the jurisdiction of the CVRWQCB and is subject to the waste discharge requirements of the NPDES Permit.

The proposed project also would also be required to obtain a General Construction Permit. The General Construction Permit requires implementation of a SWPPP with BMPs such as stabilization of construction entrances, straw wattles, and placement sediment filters on existing inlets. The SWPPP would also contain a site map(s) showing the construction perimeter, existing and proposed buildings, storm water collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and a visual monitoring program.

This City is consistent with these requirements as shown in Stormwater Management Ordinance contained in Title 132, Chapter 13.20 – Storm Water Management. The City would ensure all permitting conditions are followed by following Section 13.20.030 – Authority to Condition or Deny. This section states that the director can condition or deny any discharge, and further sub section A) the director is authorized to issue permits, restricting or limiting the nature and/or volume of any discharge to the storm water system. It further stipulates that all permits issued under this authority must comply with the provisions of this ordinance and/or variances authorized by the City Council.

It should be noted, because the proposed project is indoor cultivation, has a concrete floor and full roof, the proposed project would be conditionally exempt from SWRCB Order WQ 2019-0001-DWQ. Nonetheless, the proposed project would provide all relevant documentation of the conditionally exempt status to CDFA, and would still obtain coverage under the Waiver included in general order. This would ensure the waiver was appropriately applied to the proposed project.

Preparation, implementation, and participation with both the NPDES General Permit and the General Construction Permit (SWPPP and BMPs) as well as following City requirements, would reduce project grading and construction effects on water quality. As a result, short-term construction impacts associated with water quality standards and wastewater discharge requirements would be less than significant.

Operational Related Discharges

The proposed project would create impervious surfaces within a site that is currently undeveloped and covered by soil and vegetation. The proposed project also includes construction of a single structures, two adjacent enclosures, hardscape for parking lots and interior circulation. Approximately 10% of the site would be landscaped. This would result in an increased potential for surface water run-off from the site as less water would be able to infiltrate after rain events.

The proposed project would include an on-site storm drainage system to collect intermittent rainwater flows. The storm drainage system would be designed to accommodate all flows and would implement integrated management practices to treat the drainage area. Accordingly, as required by the City Phase I and II Municipal Separate Storm Sewer System (MS4) permits, the City would ensure the project applicant would use low impact development (LIDs) strategies. The LIDs would include source control BMPs such as marked inlets stating, "No Dumping – Drains to Bay," landscaped areas would be used to the extent feasible to promote infiltration, and runoff from sidewalks and parking lots would be collected and flow to bioretention areas as feasible.

Compliance with the MS4 permit, as verified by the City prior to final project approval, would ensure the proposed project includes applicable design concepts for LIDs and the post construction BMPs for source control. The city would communication with the applicant to verify all measures remain in place and are functional through the life of the project. To further ensure all requirements are adhered to, the proposed project includes MM-HYD-1. With implementation of this measure and City efforts to ensure compliance construction and operational impacts associated with water quality standards and wastewater discharge requirements would be less than significant.

MM HYD-1: Construction Water Quality Plan. Prior to issuance of any grading permit, the applicant shall submit to the satisfaction of the City Community Development Department, a Storm Water Pollution Prevention Plan (SWPPP) that satisfies the requirements of the National Pollutant Discharge Elimination System (NPDES) and State General Permit for construction. The SWPPP shall incorporate Best Management Practices (BMPs) to control runoff and sedimentation in accordance with all CVRWQCB as well as City requirements. Recommended BMPs for the construction phase may include the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly;
- Protecting existing storm drain inlets and stabilizing disturbed areas;
- Implementing erosion controls;
- Properly managing construction materials; and
- Managing waste, aggressively controlling litter, and implementing sediment controls.

Significance of Impact After Mitigation:

Implementation of **MM-HYD-1** and conformance with all applicable regulations as conditions of project approval would reduce impacts to less than significant.

b) *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

According to the 2010 City of Rio Vista Urban Water Management Plan, water in the city is supplied via 7 groundwater wells in the Solano Sub-basin. The Solano sub-basin lies in the southwestern portion of the Sacramento Basin and the northern portion of the Sacramento-San Joaquin Delta. Primary waterways in and bordering the basin include the Sacramento, Mokelumne, and San Joaquin Rivers, the Sacramento River Deep Water Ship Channel, and Putah Creek. As of 2010, the City had approximately 4,225 acres of land within its water service boundary. At that time there were approximately 2,213 acres (52%) that was developed (City of Rio Vista, 2010). It should be noted that not all developed land contains impervious surfaces. Much of this area would contain landscaping and other pervious areas that facilitate infiltration. Due to the slow growth within the city over the last 10 years, this value would not have substantially changed.

The proposed project occupies approximately 1.24 acres that is undeveloped and consists of soil and upland ruderal vegetation. Construction and operation of the proposed project would reduce the amount of impermeable surface on the site and reduce the sites potential to facilitate groundwater recharge. To minimize these effects, the proposed project would include LIDs including conducting run-off from hardscape to landscaped areas and inclusion of drainage systems that could minimize runoff and facilitate infiltration. As part of the overall redevelopment plan for the Business Park, the City has incorporated a retention/detention basin which would receive stormwater flows from the project site and other redeveloped areas. The basin is located to the south of the project site across Stan Simi Drive.

According to most recently published City Consumer Confidence Report dated March 2018, the city pumped approximately 689,842,000 gallons of water from the wells (City of Rio Vista, 2018). The wells are not currently adjudicated (City of Rio Vista, 2015). This is the equivalent of approximately 2,117-acre feet. Additionally, as a member of the Solano County Water Authority (SCWA), the City of Rio Vista eventually will hold rights to 1,500-acre feet of water from the North Bay Aqueduct project (NBA). However, because Rio Vista is a significant distance from the NBA facility, it is more likely the City would trade its rights to that water for additional Sacramento River water if needed. Future water sources may include additional wells, recycled water, the Sacramento River, and purchased water from the Solano County Water Agency (City of Rio Vista, 2010).

The proposed would use water supplied by the City from the above listed sources. The proposed project does not include growing of cannabis but only extraction processes. These processes are not water intensive and the proposed project would use a volume of water consistent with other light-industrial uses of a comparable size. Based on the proposed project would use approximately 86 gallons per day per employee for a miscellaneous industrial/manufacturing business. This which equate to approximately 77,400 gallons per year considering a 225-day work year (Pacific Institute, 2020) based on the California Department of Water Resources information from 2013, or approximately 0.2-acre feet per year (af/y). This would equate to approximately, 00009% of water pumped by the City in 2018.

Based on 1.24-acre project site would occupy a portion of the former Rio Vista Municipal Airport that is planned to be reused and redeveloped as a business park by the City. The relatively small volume of water required by the proposed project, and the use of LID that would help facilitate infiltration and

groundwater recharge, the proposed project would have a less than significant impact on groundwater and the basin. No mitigation is required.

Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site?

The project site is flat and slopes slightly to the south. The project site does not contain any stream or rivers, nor would it modify any water of the US. The proposed project does include the construction and grading of approximately 1.24 acres, the majority of which would be converted to impermeable surfaces including the roof of the structure, driveways, parking lot, and pedestrian pathways. Unpaved areas would be landscaped with ground covers that would facilitate infiltration and reduce the potential for erosion. The proposed project would be designed to convey runoff to these locations and facilitate infiltration. In addition, as discussed in a) above, the proposed project would comply with all applicable NPDES permitting procedures and implement a SWPPP with BMPs verified by the City. These measures would reduce impacts associated with erosion and/or siltation. Therefore, while the proposed project would change the drainage pattern, the alterations would not result in substantial erosion or siltation. In addition, implementation of mitigation measure **MM HYD-1**, would ensure impacts would be less than significant

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

The project site is flat and slopes slightly to the south and grading would be minimal to achieve the level surface needed to construct the proposed project. Due to this minimal change, the topography of the site would not be substantially altered. No streams, rivers, or any other water would be affected. The proposed project would develop the majority of the site with new impervious surfaces that would reduce the rate of percolation in those areas and that could concentrate and accelerate surface runoff in comparison to the existing conditions. The proposed project does include landscaped areas that would facilitate infiltration and reduce the effects of the new impervious surfaces. In addition, the BMPs associated with the SWPPP that would be designed to address the new drainage pattern would prevent flooding onsite or offsite. Therefore, while the proposed project would change the existing drainage pattern, it would not be substantially altered such that either the increased rate or amount of surface runoff would not be accommodated by existing and planned drainage facilities such that the project would result in flooding on or offsite. Impacts would be less than significant, and mitigation is not required.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As discussed in ii) above, the BMPs required by the SWPPP would prevent sources of polluted runoff. The project would result in slight modifications of the existing drainage patterns of the site, but the flows would be accommodated by the existing and planned drainage facilities. Substantial increases in polluted runoff would not occur during construction as a result of the measures such as silt fences, straw wattles, and hay bales to impede and slow potential runoff, and the use of LIDs and project incorporated landscape.

These measures would facilitate infiltration and help filter pollutants from entering receiving waters. In addition, implementation of **MM HYD-1**, would ensure impacts would be less than significant.

iv. Impede or redirect flood flows?

As discussed in i), ii), and iii) above, construction and operational activities would slightly modify the existing drainage patterns of the site. The proposed project; however, is not located within a floodplain and there are no waters, rivers, or streams on the project site. Neither construction nor operation would have the potential to affect, impede, or redirect flood flows. The proposed project would be required to comply with the NPDES permitting requirements as well as be all City MS4 permitting prior to approval of any grading or construction permits. In addition, the proposed project is not located within a flood zone. The Federal Emergency Management Agency (FEMA) flood map service center shows that the project site is in a Zone "X" which is an area of minimal flood hazard. This is shown on plate 06095C0537E dated (05/04/2009). Therefore, impacts would be less than significant, and mitigation is not required.

v. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

As discussed above, the proposed project would result in minor alterations to the site and existing drainage. The proposed project is not located within a flood zone. The FEMA flood map service center shows that the project site is in a Zone "X" which is an area of minimal flood hazard. This is shown on plate 06095C0537E dated (05/04/2009). The proposed project is 34 feet above mean sea level (amsl) and is located approximately 0.4 miles west of the Sacramento River which is at an elevation of approximately 2 feet. The proposed project is not located near an ocean and is not at risk of tsunami, and it is not near an enclosed body of water such as a lake or inland sea which would be susceptible to seiche. Therefore, no changes would occur within an areas susceptible to inundation cause by the listed sources. This impacts would be less than significant, and mitigation is not required.

vi. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed above, the proposed project would result in the creation of impervious surfaces over a very small percentage of basin recharge area. The proposed project would occur within an area planned to be reused and redeveloped and is the former site of the Rio Vista Municipal Airport. Approximately 2,213 acres of development exist in the City, which is approximately 52% of the total 4,225-acre land area. The 1.24-acre site represent an increase of approximately .05% of development. In addition, the proposed landscaped areas and the drainage design would help maintain existing drainage patterns and maximize flows to pervious areas and facilitate infiltration.

The City uses groundwater from the Solano Sub-basin as its primary water source. There is no groundwater management plan adopted for the basin (City of Rio Vista, 2010). On January 1, 2015, the Sustainable Groundwater Management Act was adopted. This act requires that a Groundwater Sustainability Agency (GSA) must be formed and the GSA is to develop, implement and enforce a groundwater sustainability plan. The GSA for the Solano Sub-basin was formed, and they will submit a plan to the California Department of Water Resources by January 21, 2022. The plan has not yet been submitted or adopted, hence, there is not groundwater management plan for the basin.

The 2015 UWMP, notes that groundwater levels in the sub-basin are impacted by periods of drought due to increased groundwater pumping and less surface water recharge. The UWMP further notes the sub-basin does recover quickly in "wet" years and historical trends indicate that water levels in the sub-basin are not in decline.

Therefore, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The proposed project would use a small volume of water, would use LIDs that would help facilitate infiltration and groundwater recharge, and because there is no groundwater management plan adopted, there would be no conflict in this regard. Impacts would be less than significant, and mitigation is not required.

Cumulative Impacts

Cumulative impacts to hydrology and water quality could occur as new development, redevelopment, and existing uses are ongoing within the watershed and specifically within the reuse and redevelopment plan area of the former Rio Vista Municipal Airport. Based on previous growth trends, growth in the City is not anticipated to be substantial and would not significant add to urbanization. New development and redevelopment projects would result in some increases in impervious surfaces, and thus could generate increased runoff and reduce infiltration capacity from the affected project sites. Future developments in the watershed would be required to comply with the SWRCB and CVRWQB. Depending on the size of future projects, they would be required to obtain and comply with all required water quality permits and develop Water Quality Control Plan, as needed and prepare and implement SWPPPS, implement BMPs, including LID BMPs to minimize runoff, erosion, and storm water pollution. For project outside Rio Vista but within the basin, the project also would be required to comply with applicant County and City codes. As part of these requirements, projects would be required to implement and maintain source controls, and treatment measures to minimize polluted discharge and prevent increases in runoff flows that could substantially decrease water quality. Therefore, taken in conjunction with past, present, and reasonably foreseeable projects, the proposed project is not expected to cause substantial increases in storm water pollution. With compliance with State and local mandates, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

4.11 Land Use and Planning

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

a) Physically divide an established community?

The project property occupies 1.24 in the City of Rio Vista within the boundaries of the former City of Rio Municipal Airport. The former airport site is planned for redevelopment with industrial uses and has a General Plan land use designated as Industrial/Employment Limited (I-E-L) and is zoned as a Business Park (B-P). The project site is vacant with no built structures. Surrounding uses include vacant land, industrial uses, and other remnant hardscape from the airport.

The nearest residential area is approximately 0.25 miles to the west. Other residential areas are located approximately 0.5 miles to the northwest, 0.5 miles to southwest, and 0.5 miles to the south adjacent to the Sacramento River. The former airport property is not used as a travel corridor between the existing neighborhoods. These communities are already separated in space and not directly connected. The residential areas; however, are linked via existing roadways including Airport Road to the east and Hwy 12 to the west. The proposed project would not affect or impede travel on either roadway. Therefore, the proposed project would not result in the physical division of an established community and impacts would not occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project is a cannabis related business and it would follow the development review and design and approval process set forth by the City. This process would ensure the proposed project is consistent with all applicable land use planning, policy, and regulatory documents. This process would enable the City to condition the project prior to approval. Cannabis related businesses such as the proposed project are specifically listed as an allowable use within the business park and the proposed project as well as other cannabis related projects are anticipated to occupy the area. The City of Rio Vista Municipal Code Chapter 17.70 Cannabis Businesses, sets forth the needed project components including

security plans, access requirements, and needed ventilation. The municipal code defines the land use designations and zones in which cannabis is authorized (Business Park (B-P) and Industrial Park and/or Industrial (I-P-I) designations). Because the proposed project is consistent, neither a General Plan Amendment nor a Zone Change are required.

In addition to the discretionary approvals required by the City, the proposed project would be available for the CEQA required review and comment period afforded to trustee and responsible agencies, and any other public agency or member of the public wishing to comment. This would help ensure compliance with all applicable plans, policies, regulations, standards, and that conditions of approval are included if needed. As noted within the other sections of analysis, the proposed project would have no impacts, a less than significant impact, or less than significant impact with mitigation. Therefore, the proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Cumulative Impacts

The proposed project is consistent with all applicable land use planning and regulatory documents. In addition, due to its location within the former site of the Rio Vista Municipal Airport, an area which is designated for industrial uses and zoned as a Business Park (B-P), the proposed project is consistent with applicable City planning documents. The proposed project would not physically divide an established community and would not block any existing travel ways. Taken in conjunction with other past, present, and reasonably foreseeable projects within the business park, cumulative impacts also would be less than significant. All other projects would require City and agency review to ensure consistency with applicable plans, policies, and regulations, prior to approval. Similarly, other projects in the vicinity and located in the former airport site, also would not make a cumulative contribution to the physical division of an established community. Therefore, cumulative impacts of the proposed project would be less than significant, and mitigation is not required.

4.12 Mineral Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

The City of Rio Vista General Plan discusses mineral resources in the context of Open Space which includes agricultural lands, mineral extraction lands, and natural habitats. The project site and surrounding areas are designated for industrial uses and zoned for use as a business park. There are no adjacent open space areas that would be used for mineral extraction. Per the CDOC, none of the City or surrounding areas are noted as mineral resource zones [(CDOC, 2015). Geologic Energy Management Division (CalGEM, formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR)]. There are no active, inactive, or capped oil wells located within the project site. The nearest well is an idle dry gas well owned by the California Resource Production Corporation (CRPC) near the intersection of Poppy House Road and St. Francis Way. This area is approximately 0.2 miles southwest of the project site (CalGem, 2018). The proposed project would not affect the ability of CRPC to operate the well or impede the use of any other area that may contain mineral resources. Therefore, no impacts would occur.

b) *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

As discussed above, the proposed project would not affect the ability of any person or entity to use or extract mineral resources. The City has designated the project site and surrounding area for industrial uses as part of a business park on the former site of the Rio Vista Municipal Airport. In addition, due to the patterns of development and ongoing redevelopment efforts, it would not be feasible to extract minerals or develop a mine from the site or area due to land use. Therefore, because the project site does not contain known mineral resources, would not conflict with any resource recovery plan, and would be consistent with the City’s intent for reuse and redevelopment, impacts would not occur.

Cumulative Impacts

As discussed above, the proposed project and surrounding area is not designated for mineral extraction and is consistent with City planning and development goals. Similarly, other past, present, and reasonably foreseeable projects in the vicinity also would not conflict with these plans or reduce the availability or access to a known mineral resource. Therefore, cumulative impacts would not occur.

4.13 Noise

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of 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?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) 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?			X	

Fundamentals of Sound and Environmental Noise

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 which make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Because 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 because of its potential to disrupt sleep, to interfere with speech communication, and to damage hearing. 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 can vary from an occasional aircraft or train passing by to virtually continuous noise from, for example, traffic on a major highway.

Addition of Decibels

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

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 stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as roadway noise, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or 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 manner in which 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.

Noise Descriptors

The decibel 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 upon people is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the Ldn and CNEL are measures of community noise. Each is applicable to this analysis and defined below.

- L_{eq} , the equivalent energy noise level, 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. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- Ldn, the Day-Night Average Level, 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 logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA Ldn.
- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 5 dBA “weighting” during the hours of 7:00 PM to 10:00 PM and 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 evening and nighttime, respectively.

The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.

- Lmin is the minimum instantaneous noise level experienced during a given period of time.
- Lmax is the maximum instantaneous noise level experienced during a given period of time.
- Percentile Noise Level (Ln) is the noise level exceeded for a given percentage of the measurement time. For example, L10 is the noise level exceeded for 10 percent of the measurement duration, and L50 is the noise level exceeded for 50 percent of the measurement duration.

There are no existing noise sensitive land uses in the immediate project vicinity. The nearest sensitive receptors are residential uses located approximately 1,300 feet to the northwest of the project site.

The City of Rio Vista General Plan identifies an exterior noise standard of 65 dBA Ldn for residential land uses. Noise mitigation measures are required for projects that would result in a substantial increase (i.e., 3 dBA, or greater) in ambient noise levels that would exceed the City's exterior noise level of 65 dBA Ldn for residential land uses. The City also limits typical construction activities to between the hours of 7:00 AM and 7:00 PM Monday through Friday. Construction is not allowed on weekends. Project construction would be required to comply with these hours.

The City's Noise Ordinance (Title 17, Noise Control, Chapter 17.52) identifies prohibitions and noise standards intended to protect citizens from unnecessary and unusually loud noises that could adversely affect the peace, health, and safety of community residents. For noise sources affecting residential districts, noise levels may not exceed 50 dBA Leq.

- c) *Generation of 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 approximately 1,300 feet from existing single-family residences to the northwest. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery.

Construction activities associated with development of the proposed project would include site preparation, grading, paving, building construction, and architectural coating. Such activities would require graders, scrapers, and tractors during site preparation; graders, dozers, and tractors during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, tractors, and paving equipment during paving; and air compressors during architectural coating. Grading and excavation phases of project construction tend to be the shortest in duration and create the highest construction noise levels due to the operation of heavy equipment required to complete these activities. It should be noted that only a limited amount of equipment can operate near a given location at a particular time. Equipment typically used during this stage includes heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, and scrapers. Operating cycles for these types of construction

equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Other primary sources of noise would be shorter-duration incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts, which would last less than one minute. According to the applicant, no pile-driving would be required during construction and as such a project condition of approval will be included in the project permit to reflect the project's proposed construction.

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 9: Typical Construction Noise Levels*.

The City of Rio Vista does not have construction noise standards. As shown in *Table 9* noise levels at the sensitive receptor are below 67 dBA at 1,300 feet. The nearest sensitive receptor to the project site is located approximately 1,300 feet northwest of the site. The highest anticipated construction noise level of 67 dBA at 1,300 feet is expected to occur (saw). Additionally, the majority of construction would occur throughout the project site and would not be concentrated at a single point near sensitive receptors. Construction would comply with Section 17.25.030 of the municipal code, limiting construction hours within 500 feet of a residential unit to the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday.

Table 9: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) at 50 feet from Source ¹	Typical Noise Level (dBA) at 1,300 feet from Source ¹
Air Compressor	80	52
Backhoe	80	52
Compactor	82	54
Concrete Mixer	85	57
Concrete Pump	82	54
Concrete Vibrator	76	48
Dozer	88	60
Generator	83	55
Grader	85	57
Impact Wrench	82	54
Jack Hammer	85	57
Loader	85	57
Paver	88	60
Pneumatic Tool	80	52
Pump	85	57
Roller	101	73
Saw	95	67
Scraper	85	57
Shovel	77	49
Truck	85	57
Note: ¹ Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1 + 20\log(d_1/d_2)$ 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, <i>Transit Noise and Vibration Impact Assessment Manual</i> , September 2018.		

As noted earlier, there are residential uses located approximately 1,300 feet northwest of the project site. Commercial and industrial facilities are located adjacent to the west and east of the project site. There

are no noise sensitive uses immediately adjacent to the site. Based on the noise levels discussed above and the distance to nearest receptors, construction noise would result in a less than significant impact.

Operational

Project operations, including cannabis product manufacturing, would occur indoors within structures. No significant noise sources are predicted or planned for this use. Other noise sources would include increased vehicle traffic to the site. However, with approximately five employees on site at one time and associated traffic, this represents a minimal increase in an environment that has existing truck and industrial noise from adjacent uses. In comparison to existing and future background conditions, the proposed project would result in negligible change once operational. As a result, this impact would be less than significant.

d) Generation of excessive groundborne vibration or groundborne noise levels?

There are no federal, state, or local regulatory standards for ground-borne vibration. However, various criteria have been established to assist in the evaluation of vibration impacts. For instance, the California Department of Transportation (Caltrans) has developed vibration criteria based on human perception and structural damage risks. For most structures, Caltrans considers a peak particle velocity (ppv) threshold of 0.2 inches per second (in/sec) to be the level at which architectural damage (i.e., minor cracking of plaster walls and ceilings) to normal structures may occur. Below 0.10 in/sec ppv there is virtually no risk of 'architectural' damage to normal buildings. Levels above 0.4 in/sec ppv may possibly cause structural damage (Caltrans 2002).

In terms of human annoyance, continuous vibrations in excess of 0.1 inches per second ppv are identified by Caltrans as the minimum level perceptible level for ground vibration. Short periods of ground vibration in excess of 0.2 inches per second can be expected to result in increased levels of annoyance to people within buildings (Caltrans 2002).

Increases in groundborne vibration levels from the proposed project would be primarily associated with short-term construction-related activities. Project construction would require the use of off-road equipment, such as tractors, concrete mixers, and haul trucks. The proposed project is not expected to use major groundborne vibration-generating construction equipment, such as pile drivers.

Construction equipment groundborne vibration levels are summarized in *Table 10: Typical Construction Equipment Vibration Levels*. Based on the vibration levels, ground vibration generated by construction equipment would not be anticipated to exceed approximately 0.089 inches per second peak particle velocity (ppv) at 25 feet. Predicted vibration levels at the nearest on- and off-site structures (200 feet for non-residential structures and 1,300 feet for residential structures) would not exceed the minimum recommended criteria for structural damage and human annoyance (0.2 and 0.1 inches per second ppv, respectively). As a result, this impact would be less than significant.

Table 10: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 1,300 Feet (in/sec) ¹
Large Bulldozer	0.089	0.0002
Loaded Trucks	0.076	0.0002
Rock Breaker	0.059	0.0002
Jackhammer	0.035	0.0001
Small Bulldozer/Tractors	0.003	0.0000
1. Calculated using the following formula: $PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$, 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, <i>Transit Noise and Vibration Impact Assessment Manual</i> , 2018; D = the distance from the equipment to the receiver. Source: Federal Transit Administration, <i>Transit Noise and Vibration Impact Assessment Manual</i> , September 2018.		

e) *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 proposed project is within two miles of the Rio Vista Municipal Airport. However, the proposed use, indoor manufacturing, is not sensitive to aircraft noise and the proposed project would not be within the direct flight path of aircraft. Therefore, the proposed project would have a less than significant impact.

Cumulative Impacts

As discussed above, the proposed project would not cause a new noise impact to occur, nor an increase in the severity of a noise impact. Therefore, the proposed project would not cause either a new cumulative impact to occur, nor an increase in the severity of a cumulative impact previously disclosed.

4.14 Population and Housing

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The project site is on the former site the Rio Vista Municipal Airport designated by the RVGP for use as Industrial/Employment Limited (I-E-L) and is zoned as Business Park (B-P). The proposed project is consistent with the plan and zoning. The proposed project is considered an industrial use and does not include new dwelling units and would not induce population growth on the project site. The project site would be connected to existing off-site roadways in the area but would not extend any streets or infrastructure to any area not already planned for development. The proposed project is within the interior of the business park and would be served by existing roadways or those already planned as part of the redevelopment of the airport. In addition, the proposed project would be served by planned utilities and would not result in the extension of services to any off-site area.

The proposed project would have five employees and does not anticipate the need for any part time employees. The proposed project would not induce substantial population growth by creating employment opportunities. According to the California Department of Finance (CDOF), the City of Rio Vista had a population of approximately 9,594 people in January of 2019 and a population of approximately 9,987 in January of 2020. This was an increase of 393 residents year over year and represents population growth of approximate 4.1% (CDOF, 2020).

The proposed project would draw employees from within the City and nearby areas within Solano County. According to the California Employment Development Department (CEDD) The unemployment rate in Solano County was 14.2 percent in May 2020, down from a revised 15.1 in April (CEDD, 2020). Within the

City, unemployment was 17.4% as of June 2020 (CEDD, 2020). Based on the current unemployment numbers and growth trends, jobs created by the proposed project are anticipated to be filled from the existing labor pool in the City and County. Therefore, the proposed project would not result in substantial population growth. Impacts would be less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project would not require demolition of any housing. The project site is currently undeveloped. The project site is designated for industrial uses and zoned as a Business Park as part of the redevelopment efforts of the former Rio Vista Municipal Airport. Therefore, the proposed project would not displace any residents and replacement housing would not be required. No impacts would occur

Cumulative Impacts

The proposed project is consistent with the intent of RVGP and zoning ordinance for redevelopment and reuse of the former Rio Vista Municipal Airport. The proposed project does not include any residential units that would result in population growth and does not include extension of services or utilities that would encourage other development in off-site areas. In addition, the proposed project is anticipated to employ local residents and residents in the surrounding County areas. Thus, taken in sum with other past, present, and reasonably foreseeable projects, the proposed project would not make a cumulative contribution to population or housing growth. Impacts would be less than significant.

4.15 Public Services

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?			X	
iv) Parks?			X	
v) Other public facilities?			X	

In this subsection, the proposed project is evaluated for its impact on existing school, police, fire, governmental, and emergency services in Rio Vista. Fire and police protection to the project site is provided by the City of Rio Vista Fire Department and the City of Rio Vista Police Department, respectively. The project site is located in the service areas of the River Delta Unified School District. Parks and recreation facilities in the city are the responsibility of the Rio Vista Parks Department.

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

i. *Fire protection?*

The City of Rio Vista Fire Department (RVFD) provides 24 hour a day seven days a week to the City of Rio Vista and Delta Fire Protection District. RVFD provides emergency response services for, but not limited to, structural fires, wildland fires, limited hazardous materials events, vehicle extrication, and technical rescue. The RVFD provides Automatic Aid to the City of Isleton, and River Delta Fire Protection District, and are participant in the Solano County Mutual Aid Agreement (City of Rio Vista, 2020).

RVFD operates out of one fire station at 350 Main Street. RVFD maintains a daily staffing target of 4 personnel including 1 Fire Captain, 1 Engineer, 1 Firefighter Paramedic and 1 Reserve Firefighter. Staffing is augmented with the utilization of either Volunteer or Reserve Firefighters. The department apparatus includes: 2 Type-1 Engines, 1 Type-3 Engine, 1 Water Tender, 1 (95') Ladder Truck (platform), 1 light-Rescue, 1 Squad and 2 staff vehicles (City of Rio Vista, 2020).

The proposed project includes construction and operation of two approximate 15,000 sf cannabis facilities that would be constructed in two phases. The proposed project anticipates two owners working full-time, approximately three additional full-time employees, and up to eight part time employees. As discussed in the Population and Housing Section above, the proposed project anticipates hiring workers from within the City and surrounding communities. These workers would already be using existing local emergency services should the need arise. The proposed project; therefore, would not result in significant environmental impacts in this regard. The proposed project would not substantially increase the population such that demand for services such that a new fire station would be required to maintain acceptable service ratios, response times, or for other fire protection needs.

Construction and operation of the proposed project could result in increased demand for fire protective services should a call originate from the project site. Prior to project approval, the City would ensure that construction activities and all project plans would include all applicable local and State fire codes. Fire protection services also are planned for in the RVGP. The RVGP notes that a fire facility is needed to maintain recommended response times to the northwest neighborhoods (Trilogy, Gibbs and Brann Ranches, and the Rio Vista Municipal Airport). The RVGP further states that the new fire station facility would be located within the business park area (City of Rio Vista, 2002) which is already planned to be developed. The proposed project would pay development impact fees in accordance with the City fee schedule to offset costs of the new but planned fire station. With conformance to these policies, the City would maintain adequate Fire Department performance and response standards to the project site and balance of the community.

Therefore, the proposed project would not increase demand for fire protection services such that new facilities, beyond those which are already planned, would be needed. Impacts would be less than significant, and mitigation is not required.

ii. Police protection?

Law enforcement services to the City is provided through contract with the Solano County Sheriff's Office. The City's agreement with Solana County provides for a total of 12 law enforcement personnel. Solano County deputies serve the City in uniform as City Police and use City police vehicles. The 12 personnel are comprised of one Lieutenant Sheriff, 2 Sergeant Sheriffs, and 9 Deputy Sheriffs on rotating 12-hour shifts. One of the deputies serves as a canine officer and one as a School Resources Officer (SRO)/Problem Oriented Policing Officer during the weekdays. Based on the existing estimated City population 9,987, this equates to approximately 1.21 officers per 1,000 residents.

The Police Department is located at 50 Poppy House Road within the City and within the former Rio Vista Municipal airport business park. The site occupied by the police station is adjacent to the northern project boundary. The Police Department participates in numerous community outreach programs and events and provides law enforcement services through patrol and field services, traffic enforcement, and additional services such as responding to requests for extra patrol, use of a radar trailer, making community presentation, etc.

The proposed project would not increase the local population or add additional streets into the police patrol network. The proposed project would not result in significant environmental impacts related to the department needing new facilities to maintain acceptable service ratios, response times, or other performance metrics. As part of the development and approval process, the applicant, in accordance with Section 17.70.030 Commercial Cultivation of Cannabis regulated, would be required to implement a security plan. The security plan would be designed to prevent access by unauthorized personnel such as through the use of security gating or fencing, with a lockable gate. In addition, all access points to the structures including doors, windows, shipping docks, roof, ventilation, etc., would be lockable. The security plan also would include an electronic security system, identification process, materials tracking system, restricted employee access as needed, and monitoring of loading and unloading areas. The security plan requires review by the building office and police department to ensure there is adequate mechanical and electronic security systems for the proposed project operations. The project applicant also would pay appropriate impact fees related to police protection and is responsible for constructing all on-site security infrastructure needed to serve the project.

Because the proposed project is in close proximity to the existing police station, would not result in substantial increase directly or indirectly of City population, and would include a robust security system, new law enforcement facilities that could have an effect on the environmental would not be required. Impacts would be less than significant, and mitigation is not required.

iii. Schools?

The proposed project is within the River Delta Unified School District (RDUSD). The proposed project is an industrial development that would be used for cannabis cultivation and would not directly result in population increase or generate new students. The proposed project is anticipated to need four full-time employees. Due to the existing high unemployment rate and proximity to the existing workforce within the City of Rio Vista and surrounding communities, employees are anticipated to come from the existing population base. Accordingly, the proposed project would not require the influx of new residents resulting in substantial population growth and increased demands on schools. Thus, the construction of new school facilities would be required as a result of project implementation and impacts in this regard would be less than significant.

iv. Parks?

The proposed project would be served for recreational resources by the City of Rio Vista Parks Department. The City has seven parks including, Bruning Park (1.5 acres), Crescent Park (0.25 acres), Drouin Park (1.1 acres), Egbert Field Park (5 acres), Homecoming Park (1 acre), Memorial Park (1.5 acres), Val de Flores Park (3.0 acres), Waterfront Promenade Boat Launch and Picnic Area, and two other recreation facilities including a basketball court and a small skateboard facility (City of Rio Vista, 2020).

The proposed project includes construction and operation of a cannabis facility that anticipates five full-time employees. As discussed in the Population and Housing Section above, the proposed project anticipates hiring workers from within the City and surrounding communities. These workers would already be using existing recreational resources. Thus, the proposed project would not increase demand for parks such that new recreational areas would need to be constructed. Impacts would be less than significant, and mitigation is not required.

v. Other public facilities?

Other public facilities generally refer to facilities such as libraries, community services, and government operations. Library services to the City are provided by the Solano County Library which maintains the Rio Vista Library at 44 South Second Street in the City of Rio Vista. The library provides a selection of book, a meeting room, 14 public access computers with 2 reservation computers (all are customizable for dexterity, hearing, and visual needs), 1 public printer, 1 scanner, wifi, 1 self-service photocopier, and 1 microfilm/fiche reader.

The proposed project would result in the demand for approximately four full time employees, all of which are anticipated to come from within the City or surrounding community's that would, when need demands, already be using the existing other public facilities. Thus, the proposed project would not increase demand for other public facilities such that new facilities would need to be constructed. Impacts would be less than significant, and mitigation is not required.

Cumulative Impacts

As described above, the proposed project would be served by RVFD and would not result in substantial growth such that a new and unplanned fire station would be needed. Similarly, the proposed project would be served by the Solano Sheriff's Department through a contract with the City and act as Rio Vista Police. The proposed project would not result in a substantial increase in the service population or a use that would require substantially more police than presently accommodate City needs. The project would be within the RDUSD but would not generate new students because the proposed project is not residential. Indirectly, the proposed project also would not result induce a substantial population increase through the construction of homes such that new school(s) would be required. Similarly, the proposed project and new employees, should they come from outside the City, would be adequately served by existing parks and other public utilities. Therefore, taken in sum with past, present, and reasonably foreseeable projects, the proposed project would not make a cumulative contribution to increase demand for public services such that new and unplanned facilities would be needed. In addition, any future facilities that may be proposed and developed as part of future growth of the City, would undergo separate CEQA review. It is anticipated that impacts from these types and sizes of facilities, the same as the proposed project, would be less than significant. Thus, the proposed project would not make a significant cumulative contribution to impacts in this regard.

4.16 Recreation

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

The Parks Department of the City of maintains nine park facilities and two additional recreation sites including a basketball court and the Harris De Silva Skateboard park. In sum, the Parks Department operates and maintains approximately 13 acres of parkland, excluding the acreage in the Waterfront Promenade Boat Launch and Picnic Area. This location provides direct access to the Sacramento River and hundreds of acres of waterway available for recreation. Based on the 13 acres of parkland, excluding the other three listed resources, the City’s provides 1.3 acres of parkland per thousand residents.

The proposed project consists of an industrial development that would be used for the cultivation of cannabis. As discussed in the Population and Housing sections and Public Service Section, above the proposed project would require four full time employees. The employees are anticipated to come from the City or surrounding areas and already would be using recreational resources. There is a potential employees could move to the City to obtain work at the project site, but this increase would not be substantial and would not substantially increase in the use and/or deterioration of any recreational facilities. These impacts would be less than significant, and mitigation is not required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project is an industrial development that would be used for the cultivation of cannabis. The proposed project does not propose to develop any recreational facilities, would not require the expansion of, or construction of new recreational facilities that could have an adverse effect on the environment. For these reasons, impacts would not occur, and mitigation is not required.

4.17 Transportation

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?				

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The proposed project is consistent with the RVGP. The proposed project would be located within the former Rio Vista Municipal Airport which is planned to be reused and redeveloped for predominantly industrial uses. The proposed project is considered an industrial project and consistent with the business park zone and industrial designation.

Airport Road is designated as an arterial street and would be used to access the general project area. Both St. Francis Road and Poppy House Road are designated as Local or Neighborhood Streets and would provide access to the project site and internal roadways within the business part. The proposed project would not conflict with the operation of these roadways, any roadway within the City, or any other element of the circulation system. In addition, the proposed project does not include the construction of any new roadways but would take direct access via Richard Brann Drive which is an interior roadway within the business park. The driveways connecting to Richard Brann Drive would be designed in accordance with all city requirements, and ingress and egress of vehicles would not interfere with the function of any roadways.

Transit in Rio Vista consists of an on-demand bus system, Rio Vista Delta Breeze, which offers deviated fixed route bus service between Rio Vista, Isleton, Fairfield, Suisun City, Pittsburg / Bay Point BART Station and Antioch with connections to Lodi (City of Rio Vista, 2020). There are no existing or planned fixed stop

locations within or adjacent to the project site. The proposed project would not conflict with the operation of any existing transit line or service.

As discussed above, the proposed project is within the interior of the business park and would be accessed via existing and planned roadways. The proposed project; however, would not involve construction of any roadways, sidewalk, or bike lane improvements. All improvements would be made as the roads are developed and as required by City standards and as part of the planned circulation design within business park. The proposed project would make a fair share contribution to these transportation elements through payment of development impact fees.

Therefore, the proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system. The proposed project does not include nor would it conflict with any existing or development/extension of any transit route, roadway, or bicycle and pedestrian facility. Impacts would be less than significant, and mitigation is not required.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

In accordance with SB 743, the new CEQA Guidelines section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. SB 743 was codified in Public Resources Code section 21099 and required changes to the guidelines implementing CEQA (CEQA Guidelines) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts. SB 743 shifted to focus of determining the significance of transportation impacts to focus from vehicle congestion and delay to the use of vehicle miles travelled (VMT) to or from a development as stated in the Governor's Office of Planning and Research (OPR) Technical Advisory (2018).

The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of this section immediately. On July 1, 2020, the provisions of this section became applicable statewide. The City has not yet formally adopted its updated transportation significance thresholds or its updated transportation impact analysis procedures. Section 15064.3(b)(3) provides, "that if existing models or methods are not available to estimate the VMT for a particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate".

The proposed project would require four full time employees and does not anticipate the need for part time employees. Deliveries shipment of supplies and products would occur approximately two to four times per week. Assuming that the 4 total employees travel to and from work every day and all 4 travel off-site for lunch every day, the total trips would be approximately 20 (including employees and deliveries).

Based on these estimates, the proposed project would not conflict with the OPR technical advisory on evaluating transportation impacts. OPR set forth the standard that if a project would not exceed 110 trips per day, it would not exceed the threshold or require a formal traffic study. This fact generally indicates impacts would be less than significant. In addition, because it is anticipated that employees would come from within the City or nearby communities, the travel distance from their homes to work would be minimal. Therefore, the proposed project is consistent with guidance criteria and would not exceed

thresholds. Thus, the proposed project would have a less than significant impact in this regard and no mitigation is required.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project would be accessed via a main entrance driveways on Poppy House Road and a secondary and emergency access driveway on Stan Simi Drive. The driveway on Poppy House Road would be wide enough to accommodate ingress and egress for two vehicles at a time. This driveway would be approximately 24 feet in width. The second 20-foot driveway for emergency access would be located on Stan Simi Road. All project driveways would be constructed to current standards and safety regulations, and would comply with the City and Caltrans regulations, and design and safety standards of Chapter 33 of the California Building Codes (CBC) and the guidelines of Title 24 in order to create safe and accessible roadways.

Vehicles entering and exiting the site would have a clear view of both roadways without obstructions. Specific design features would incorporate all applicable safety measures to ensure that adequate emergency access to the site and other properties surrounding the project site would not occur. Therefore, with the incorporated of the proposed design features and conformance to all applicable rules and regulations, related to roadway design and construction, the project would have a less-than-significant impact in this regard.

d) Result in inadequate emergency access?

State and City fire codes establish standards by which emergency access may be determined. The proposed project would provide main vehicle access adequate to enable ingress and egress of two vehicles as well as emergency vehicle on the northerly side of the project site. A dedicated emergency lane would be provided on the southern side of the site. Both accesses would be linked to a fire lane behind the building providing unobstructed 360-degree access to all sides of the proposed structures. In addition, the proposed project would not inhibit the ability of local roadways to continue to accommodate emergency response and evacuation activities. The proposed project would not interfere with the City's adopted emergency response plan by creating any obstruction of hazards disallowing use of roadways. Prior to project approval all project planes would be reviewed by the City planning department and fire department to ensure all access is appropriately designed. Therefore, the proposed project would have a less than significant impact regarding emergency access.

Cumulative Impacts

The proposed project would not substantially increase traffic volumes and would not impede any emergency evacuation plan or emergency access to the project site or other site. The proposed project is within the former Rio Vista Municipal airport and is being developed as part of the overall reuse and redevelopment plan for the area. The City has planned for development within the roadway and is in the process of constructing and has plans to construct the balance of the interior roadways. All roadways would be constructed in accordance with City standards and in consideration of emergency evacuation needs and potential for emergency responses. Past, present, and reasonably foreseeable projects, in conjunction with the proposed project within the business park area would be reviewed and approved prior to any project approval. All other projects also would undergo a similar CEQA review, which would include an evaluation of transportation impacts. Therefore, taken in sum, the projects contribution to

cumulative traffic impacts that would result from the 13 total employees (five full time and eight part-time) would be less than significant.

4.18 Tribal Cultural Resources

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?		X		
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?		X		

- a) *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
 - i. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*

- ii. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

In compliance with PRC Section 21080.3.1(b), the City of Rio Vista provided formal notification to California Native American tribal representatives who previously requested notification from the City regarding projects within the geographic area traditionally and culturally affiliated with their tribe. Native American groups may have knowledge about cultural resources in the area and may have concerns about adverse effects from development on tribal cultural resources as defined in PRC Section 21074. The City of Rio Vista contacted the following tribal representatives via mailed correspondence on July 8, 2020. One response was sent to the City by the Yocha Dehe Wintun Nation on July 30, 2020. No other correspondence was received before this and none has been received since..

- Kletsel Dehe Band of Wintun Indians, Charlie Wright
- Confederated Villages of Lisjan, Corrina Gould
- Guidiville Indian Rancheria, Merlene Sanchez
- United Auburn Indian Community, Gene Whitehouse
- Yocha Dehe Wintun Nation, Anthony Roberts

The correspondence from the Yocha Dehe Wintun Nation indicated the project site is within their aboriginal territories and they have a cultural interest and authority within the area. They also indicated they are not aware of known cultural resources within or near the project site, but requested that their Cultural Resources Department be contacted if any new information or cultural resources are located.

As noted above, the project site has been extensively altered by prior ground disturbance and development. However, the potential exists for project implementation to affect previously unidentified tribal cultural resources. Compliance with PRC Section 21083.2 and corresponding mitigation measures in Section 4.5, Cultural (**MM CUL-1** and **MM CUL-2**) would ensure the project would not cause a substantial adverse change in the significance of a tribal cultural resource. The listed mitigation also satisfies the request of the Yocha Dehe Wintun Nation from the July 30, correspondence. Impacts would be less than significant with mitigation.

4.19 Utilities and Service Systems

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

a) *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

The City of Rio Vista would provide water, wastewater, and storm drainage service to the proposed project. The proposed project would tie into existing sewer lines that were installed as part of the ongoing reuse and redevelopment of the business park. The sewer lines were designed and constructed with adequate capacity to serve the area. All project tie ins to the existing system would be made according to City specifications.

The City has two wastewater treatment facilities including the Beach Wastewater Treatment Plant (WWTP) and the Northwest WWTP. The Beach WWTP is near the westerly terminus of Beach Drive approximately 1.8 miles southwest of the project site. The Northwest WWTP is located approximately 0.80 miles northwest of the project site at the intersection of Airport Road and Church Road. Wastewater is conducted through the underground sewer system to the plants by approximately 41 miles of collections lines and if conducted by gravity flow and a series of pumps and lift stations.

The City of Rio Vista Sewer System Management Plan (RVSSMP) from 2010 calculated the average and peak flow based on flows at three points that would capture the flows received from the ten basins. Total average flow over a 40-day period was 0.62 million gallons per day (Mgal/d) and peak flow taken during wet weather events over the same period was 4.6 Mgal/day. The average dry weather flow to the Beach WWTP is 0.51 Mgal/day and 0.21 Mgal/day to the Northwest WWTP. Wet weather peak average flows to the Beach WWTP for the 10-Year storm flow are 0.76 Mgal/day, and 0.25 Mgal/day to the Northwest WWTP. The RVSSMP, recommended five capital improvements to three existing manholes, increased pumping capacity at the City Hall lift station, the Marina lift station, to avoid overflow conditions. All these improvements are west of the proposed project. The proposed project would not contribute to these sewer flows because wastewater from the proposed project would flow north and east to the Northwest WWTP, which has adequate capacity to serve the proposed project, which would be approximately 344 gallons per day.

It should be noted that the proposed project would contribute only minor amounts of wastewater to the treatment system. The proposed project would use approximately 86 gallons of water per day per employee. Considering the proposed project would have four full time employees, this equates to approximately 344, gallons per day, 77,400 gallons per year, or 0.2 af/y or 0.00009% of yearly supply based on 2018 volumes. Therefore, impacts in this regard would be less than significant.

As discussed above, the proposed would use water supplied by the City from seven wells that pumped a total of approximately 2,117-acre feet (City of Rio Vista, 2018). The City also, as a member of the Solano County Water Authority (SCWA) will hold rights to 1,600-acre feet of water from the North Bay Aqueduct project (NBA) (Rio Vista, 2015). However, because Rio Vista is a significant distance from the NBA facility, it is more likely the City would trade its rights to that water for additional Sacramento River water if needed. Future water sources may include additional wells, recycled water, the Sacramento River, and purchased water from the Solano County Water Agency (City of Rio Vista, 2010). Based on the listed values, the proposed project would use an incrementally small volume of water and, impacts in this regard would be less than significant.

Storm drainage facilities would be provided by the City of Rio Vista. The City's storm drainage system comprises multiple networks of inlets, pipes, and basins that flow to the Sacramento River or to terminal (retention) basins. The storm drainage system includes many miles of piping flowing into the drainages within the City or directly to river outfalls. The City's system has been designed to accommodate the industrial uses that were anticipated to be built in the business park. The proposed project would not

contribute stormwater flows beyond the designed capacity. Impacts in this regard would be less than significant.

The City of Rio Vista is served by Pacific Gas & Electric (PG&E) company for energy and natural gas needed. PG&E is the responsible agency to develop and conduct electricity-related programs for the region and would serve the proposed project through these resources. The delivery, metering, billing, operation and maintenance of wires and poles remains the responsibility of PG&E within the City. Refer to the Energy Section above for additional information. Impact in this regard would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

As noted in a) above, the proposed project would use water supplied by the City from seven wells that pumped a total of approximately 2,117-acre feet (City of Rio Vista, 2018). The proposed project would use approximately 86 gallons of water per day per employee. Considering the proposed project would have four full time employees, this equates to approximately 344, gallons per day, 77,400 gallons per year, or 0.2 af/y or 0.00009% of yearly supply based on 2018 volumes. Therefore, impacts in this regard would be less than significant.

The proposed project would not affect the City's ability to provide water in dry or multiple dry years. The City can accommodate future development with existing ground water or using some of the 1,600 sf/year of water that could be diverted from the Sacramento River. In addition, as noted in the UWMP the sub-basin does recover quickly in "wet" years and historical trends indicate that water levels in the sub-basin are not in decline. Thus, the City would have adequate water to supply the project and impacts would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The project would be constructed on land that has already been designated for industrial development in the General Plan and zoning ordinance. The City has indicated that the infrastructure necessary to serve the project is available and sufficient, and that the project would connect to the City's existing sewer systems. Thus, impacts in this regard would be less than significant and mitigation is not required.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The proposed project would result in the generation of solid waste defined in PRC §40191. The proposed project would generate garbage, trash, refuse, paper, and rubbish during operations. The proposed project would be serviced by Mt. Diablo Resource Recover (MDRR). Solid waste would be transported by MDRR to the Keller Canyon Landfill (KCLF) near Pittsburg. The KCLF is currently permitted to receive 3,500 tons per day (tpd) but is proposing to increase capacity to 4,900 tpd. The landfill has a permitted capacity of 75,018,280 cubic yard, and remaining capacity of 63,408,410 cubic yards. Both MDRR and KCLF have adequate capacity to serve the proposed project. The proposed project would recycle all green waste through MDRR. Green waste stored on-site will be in a green waste bin or in compostable bags if bags are

used. The green waste would be collected by MDRR and transported to Contra Costa Waste Service to be sorted before being transported to the Recology Recycling and compost facility in Vacaville.

e) *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Implementation of the proposed project would result in the generation of solid waste on the site, which would increase the demand for solid waste disposal. During construction these materials, which are not anticipated to contain hazardous materials, would be collected and transported away from the site to an appropriate disposal facility.

As a cannabis-related business, the project will comply with all applicable local, State and federal regulations regarding the appropriate disposal of cannabis-related waste products. Cannabis waste is considered a type of organic waste. There are three State licensing agencies that provide regulations for cannabis waste. These agencies include: Bureau of Cannabis Control, CalCannabis Cultivation Licensing, and Manufactured Cannabis Safety Branch. The proposed project would dispose of all cannabis related waste based on the regulations of the listed agencies as well as the requirements MDRR and the Recology Recycling facility.

Cumulative Impacts

Current water supply exceeds current yearly water demand within the City and projected water demand to through the year 2035 would be less than the projected supply. Based on existing and projected supplies, the City's total reasonable water volume is anticipated to be greater than projected City demand. This demand accounts for other past, present, and reasonably foreseeable projects that would use the same water supplies as the proposed project. While the population in the City is anticipated to continue to increase, population growth is not anticipated to substantially increase. Therefore, the City anticipates water supply will continue to keep pace with growth. In addition, the City maintains water efficiency measures that reduced per-capita water usage and more stringent water restrictions could be imposed on all city areas should need arise. Because there is adequate water supply and treatment capacity to serve projected demand under present per capita demand rates, the project would not require new water supply contracts to be secured or new entitlements. Lastly, the proposed project would include all required water conservation measures as would be expected of all future projects prior to approval within the City. This would help ensure that cumulative impacts associated with water supply are less than significant.

Wastewater

Based on information in City documents and provide by the City, the estimated net increased wastewater generation rate from the proposed project and other anticipated development within the City and airport reuse and redevelopment area, adequate wastewater disposal capacity exists. The proposed project and other projects that would be served by the Northwest WWTP would not exceed capacity of the plant or lines serving the plant and flows would not be in excess of dry weather design flow capacity or wet weather flow capacity. Therefore, impacts would be less than significant.

Solid Waste

The proposed project in conjunction with past, present and likely foreseeable future projects in the vicinity would use the (KCLF). The landfill has substantial capacity and is expected to serve projected demand through the lifecycle of the landfill. In addition, all other projects considered on a cumulative basis also would be required to undergo site specific environmental and CEQA review. In addition, through the planning process, all other projects would be required to comply with waste reduction strategies both for construction and during operation of the project. It is anticipated that impacts would be reduced to less than significant and would be less than cumulatively considerable.

4.20 Wildfire

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

As discussed in the Transportation Section, impacts a) and d) above, the proposed project would not impair an adopted emergency response plan or evacuation plan. The proposed project would occur within the interior of the business park and as part of the planned redevelopment within the former Rio Vista Municipal Airport.

The City’s maintains the Comprehensive Emergency Management Plan (CEMP) which provides direction for responding to disastrous occurrences in Rio Vista. The plan meets the requirements of Solano County’s policies on Emergency Response and Planning, the Standardized Emergency Management System (SEMS) Operations Area Response, defines the primary and support roles of City agencies and departments in

after-incident damage assessment and reporting requirements. The CEMP addresses interagency coordination and provides for the operation of police, fire and health services, as well as transportation alternatives in the event of a multi-hazard emergency. City evacuation procedures are described and are submitted to the State Office of Emergency Services (OES) for approval. The City will implement this plan in the event of a hazardous seismic or geologic occurrence.

In the event a large volume of emergency services are needed within the City or the City is required to be evacuated Highway 12 and Route 84 are the major thoroughfares that would be used to move vehicles and people. Secondly, Airport Road may be used to facilitate vehicle movement to the north and out of or into the City. The proposed project is close to Airport Road but project construction and operation would not impede use of the roadway during normal operations or in the case of evacuation. Impacts in this regard would be less than significant and mitigation is not required.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

As discussed in the Hazards and Hazardous Materials section g), above the Calfire Draft Fire Hazard Severity Zones in Local Responsibility Areas shows the project within an unzoned LRA area. The project site and surrounding area is comprised of industrial development, previously disturbed areas as a part of the former airport operations, and areas with bare soil as well as low growing upland and ruderal vegetation. The proposed project is not on or surrounded by any areas with steep slopes. Intermittent afternoon wind from the delta breeze would occur, but would not typically be significant enough to substantially exacerbate a fire. Because there is no wildfire risk, it would not increase the spread of wildfire. Therefore, because the proposed project is not subject to wildfire and the listed factors would not contribute to or exacerbate the risk, impacts would be less than significant. No mitigation is required.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The proposed project would be located within the planned redevelopment and reuse area of the former Rio Vista Municipal Airport. The proposed project would tie into existing planned infrastructure and would be located adjacent to planned interior roadways. As discussed above, the proposed project is not located in an area prone to wildfire and no project elements or development within the business park itself would exacerbate fire risk. Impacts would be less than significant, and no mitigation is required.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The proposed project is not in an area prone to wildfire. The project site and project area is planned for reuse as part of the redevelopment efforts of the former Rio Vista Municipal Airport. Because the project and surrounding area are planned to be developed, the potential for a wildfire to expose people or structures to aftereffects including flooding, or landslides, slope instability, or drainage changes would be less than significant and no mitigation is required.

Cumulative Impacts

The proposed project in conjunction with past, present and reasonably foreseeable projects would not make a cumulative contribution to any impacts associated with wildfire. The proposed project and all other projects planned within the City would be subject to plan review and approval which would ensure there are no conflicts with emergency and evacuation planning efforts. In addition, because the City is not in an area prone to wildfires, is relatively flat, potential wildfire impacts are remote and secondary effects such as downstream flooding, landslides, or drainage changes are similarly remote. Therefore, cumulative impacts would be less than significant.

4.21 Mandatory Findings of Significance

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
Does the project:				
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

a) *Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

As evaluated in this IS/MND, the proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife

population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation measures have been included to lessen the significance of potential impacts. Similar mitigation measures would be anticipated to be included to other projects in the surrounding area, which would share the general type of anticipated cultural, paleontological, and biological resources. Consequently, the incremental effects of the proposed project, after mitigation, would not contribute to an adverse cumulative impact on these resources. Therefore, the project would have a less-than-significant impact with mitigation incorporated.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in the impact analyses in Sections 3.4.1 through 3.4.20 of this IS/MND, any potentially significant impacts of the proposed project would be reduced to a less-than significant level following incorporation of mitigation measures. All planned projects in the vicinity of the proposed project would be subject to review in separate environmental documents and required to conform to the RVGP, Zoning Ordinance, and required to mitigate for project-specific impacts, and provide appropriate engineering to ensure the development meets applicable federal, State and local regulations and codes. As currently designed, and with compliance of the recommended mitigation measures, the proposed project would not contribute to a cumulative impact. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

All the project's impacts, both direct and indirect, that are attributable to the project were identified and mitigated to a less-than-significant level. All planned projects in the vicinity of the proposed project would be subject to review in separate environmental documents and required to conform to State regulations, the RVGP General Plan, Zoning Ordinance, and Municipal Codes to mitigate for project-specific impacts. The project will have the appropriate engineering to ensure the development meets applicable federal, State and local regulations and codes. Thus, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than cumulatively considerable. Therefore, the proposed project would not either directly or indirectly cause substantial adverse effects on human beings because all potentially adverse direct impacts of the proposed project are identified as having no impact, less-than-significant impact, or less than significant impact with mitigation incorporated.

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Appendix A
Air Quality and GHG Data

Manufacturing- Rio Vista Solano-San Francisco County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	5.21	1000sqft	0.20	5,210.00	0
Parking Lot	20.00	1000sqft	1.00	20,000.00	0
Unrefrigerated Warehouse-No Rail	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	171	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor updated per PG&E 2019 CRSR Report

Land Use - Parking lot includes paved areas for fire access

Construction Phase - Anticipated construction schedule

Demolition - No demolition

Grading - Calculated removing top 3 inches of the entire 1.24 acre site. Therefore, approx. 510 cy would be exported and approx. 510 cy would be imported to replace.

Vehicle Trips - Estimated trips generated based on 5 employees and 10 vendor/delivery trucks

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - basic control measures

Waste Mitigation -

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	110.00
tblConstructionPhase	PhaseEndDate	1/28/2021	9/30/2020
tblConstructionPhase	PhaseEndDate	2/1/2021	10/2/2020
tblConstructionPhase	PhaseEndDate	2/5/2021	10/8/2020
tblConstructionPhase	PhaseEndDate	11/26/2021	10/22/2020
tblConstructionPhase	PhaseEndDate	11/12/2021	7/29/2021
tblConstructionPhase	PhaseEndDate	12/10/2021	7/30/2021
tblConstructionPhase	PhaseStartDate	1/1/2021	10/1/2020
tblConstructionPhase	PhaseStartDate	1/29/2021	10/1/2020
tblConstructionPhase	PhaseStartDate	2/2/2021	10/3/2020
tblConstructionPhase	PhaseStartDate	11/13/2021	10/9/2020
tblConstructionPhase	PhaseStartDate	2/6/2021	10/23/2020
tblConstructionPhase	PhaseStartDate	11/27/2021	3/1/2021
tblGrading	MaterialExported	0.00	510.00
tblGrading	MaterialImported	0.00	510.00
tblLandUse	LotAcreage	0.12	0.20
tblLandUse	LotAcreage	0.46	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	171
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00

tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.49	2.94
tblVehicleTrips	ST_TR	1.68	2.94
tblVehicleTrips	SU_TR	0.62	2.94
tblVehicleTrips	SU_TR	1.68	2.94
tblVehicleTrips	WD_TR	3.82	2.94
tblVehicleTrips	WD_TR	1.68	2.94

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	0.0632	0.4935	0.4121	7.8000e-004	0.0209	0.0246	0.0455	9.4300e-003	0.0236	0.0330	0.0000	66.5632	66.5632	0.0120	0.0000	66.8639
2021	0.2106	1.1478	1.1041	2.0100e-003	0.0115	0.0567	0.0682	3.1200e-003	0.0549	0.0580	0.0000	168.2690	168.2690	0.0260	0.0000	168.9183
Maximum	0.2106	1.1478	1.1041	2.0100e-003	0.0209	0.0567	0.0682	9.4300e-003	0.0549	0.0580	0.0000	168.2690	168.2690	0.0260	0.0000	168.9183

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	0.0632	0.4935	0.4121	7.8000e-004	0.0117	0.0246	0.0363	4.7800e-003	0.0236	0.0283	0.0000	66.5631	66.5631	0.0120	0.0000	66.8638
2021	0.2106	1.1478	1.1041	2.0100e-003	0.0110	0.0567	0.0676	2.9800e-003	0.0549	0.0579	0.0000	168.2689	168.2689	0.0260	0.0000	168.9181
Maximum	0.2106	1.1478	1.1041	2.0100e-003	0.0117	0.0567	0.0676	4.7800e-003	0.0549	0.0579	0.0000	168.2689	168.2689	0.0260	0.0000	168.9181

	ROG	NOx	CO	SO2	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	30.27	0.00	8.62	38.17	0.00	5.26	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	1-1-2021	3-31-2021	0.5473	0.5473
2	4-1-2021	6-30-2021	0.6127	0.6127
3	7-1-2021	9-30-2021	0.1963	0.1963
		Highest	0.6127	0.6127

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	0.0469	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Energy	8.3000e-004	7.5900e-003	6.3700e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	13.5101	13.5101	1.0500e-003	3.4000e-004	13.6363
Mobile	9.4200e-003	0.0567	0.1077	4.4000e-004	0.0351	3.7000e-004	0.0355	9.4100e-003	3.5000e-004	9.7600e-003	0.0000	40.3651	40.3651	1.6500e-003	0.0000	40.4064
Waste						0.0000	0.0000		0.0000	0.0000	2.2654	0.0000	2.2654	0.1339	0.0000	5.6124
Water						0.0000	0.0000		0.0000	0.0000	0.7491	0.9909	1.7400	0.0771	1.8500e-003	4.2193
Total	0.0572	0.0643	0.1143	4.9000e-004	0.0351	9.5000e-004	0.0361	9.4100e-003	9.3000e-004	0.0103	3.0144	54.8667	57.8811	0.2137	2.1900e-003	63.8749

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	0.0469	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Energy	8.3000e-004	7.5900e-003	6.3700e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	13.5101	13.5101	1.0500e-003	3.4000e-004	13.6363
Mobile	9.4200e-003	0.0567	0.1077	4.4000e-004	0.0351	3.7000e-004	0.0355	9.4100e-003	3.5000e-004	9.7600e-003	0.0000	40.3651	40.3651	1.6500e-003	0.0000	40.4064
Waste						0.0000	0.0000		0.0000	0.0000	1.1327	0.0000	1.1327	0.0669	0.0000	2.8062
Water						0.0000	0.0000		0.0000	0.0000	0.7491	0.9909	1.7400	0.0771	1.8500e-003	4.2193
Total	0.0572	0.0643	0.1143	4.9000e-004	0.0351	9.5000e-004	0.0361	9.4100e-003	9.3000e-004	0.0103	1.8818	54.8667	56.7485	0.1467	2.1900e-003	61.0688

	ROG	NOx	CO	SO2	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	37.58	0.00	1.96	31.33	0.00	4.39

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	10/1/2020	9/30/2020	5	0	
2	Site Preparation	Site Preparation	10/1/2020	10/2/2020	5	2	
3	Grading	Grading	10/3/2020	10/8/2020	5	4	
4	Paving	Paving	10/9/2020	10/22/2020	5	10	
5	Building Construction	Building Construction	10/23/2020	7/29/2021	5	200	
6	Architectural Coating	Architectural Coating	3/1/2021	7/30/2021	5	110	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,315; Non-Residential Outdoor: 5,105; Striped Parking Area:

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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

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
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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
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000															

3.3 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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	1.6300e-003	0.0184	7.7100e-003	2.0000e-005	5.8000e-003	8.2000e-004	6.6200e-003	2.9500e-003	7.6000e-004	3.7100e-003	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249

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	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0578	0.0578	0.0000	0.0000	0.0578
Total	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0578	0.0578	0.0000	0.0000	0.0578

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					2.4800e-003	0.0000	2.4800e-003	1.2600e-003	0.0000	1.2600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0184	7.7100e-003	2.0000e-005		8.2000e-004	8.2000e-004		7.6000e-004	7.6000e-004	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249
Total	1.6300e-003	0.0184	7.7100e-003	2.0000e-005	2.4800e-003	8.2000e-004	3.3000e-003	1.2600e-003	7.6000e-004	2.0200e-003	0.0000	1.5127	1.5127	4.9000e-004	0.0000	1.5249

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	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0578	0.0578	0.0000	0.0000	0.0578
Total	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0578	0.0578	0.0000	0.0000	0.0578

3.4 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					9.8900e-003	0.0000	9.8900e-003	5.0600e-003	0.0000	5.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	2.7000e-003	0.0302	0.0129	3.0000e-005	9.8900e-003	1.3700e-003	0.0113	5.0600e-003	1.2600e-003	6.3200e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980

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	5.3000e-004	0.0177	3.0500e-003	5.0000e-005	1.0900e-003	6.0000e-005	1.1500e-003	3.0000e-004	6.0000e-005	3.6000e-004	0.0000	4.9088	4.9088	1.9000e-004	0.0000	4.9136
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	6.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1156	0.1156	0.0000	0.0000	0.1157
Total	5.9000e-004	0.0178	3.4500e-003	5.0000e-005	1.2200e-003	6.0000e-005	1.2800e-003	3.3000e-004	6.0000e-005	3.9000e-004	0.0000	5.0244	5.0244	1.9000e-004	0.0000	5.0293

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
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Category	tons/yr										MT/yr					
Fugitive Dust					4.2300e-003	0.0000	4.2300e-003	2.1600e-003	0.0000	2.1600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-003	0.0302	0.0129	3.0000e-005		1.3700e-003	1.3700e-003		1.2600e-003	1.2600e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980
Total	2.7000e-003	0.0302	0.0129	3.0000e-005	4.2300e-003	1.3700e-003	5.6000e-003	2.1600e-003	1.2600e-003	3.4200e-003	0.0000	2.4779	2.4779	8.0000e-004	0.0000	2.4980

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	5.3000e-004	0.0177	3.0500e-003	5.0000e-005	1.0400e-003	6.0000e-005	1.1000e-003	2.9000e-004	6.0000e-005	3.5000e-004	0.0000	4.9088	4.9088	1.9000e-004	0.0000	4.9136
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	6.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1156	0.1156	0.0000	0.0000	0.1157
Total	5.9000e-004	0.0178	3.4500e-003	5.0000e-005	1.1600e-003	6.0000e-005	1.2200e-003	3.2000e-004	6.0000e-005	3.8000e-004	0.0000	5.0244	5.0244	1.9000e-004	0.0000	5.0293

3.5 Paving - 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	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Total	5.5100e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8829	5.8829	1.8600e-003	0.0000	5.9295
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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	2.4000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4695	0.4695	1.0000e-005	0.0000	0.4698
Total	2.4000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4695	0.4695	1.0000e-005	0.0000	0.4698

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	4.2000e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295
Paving	1.3100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.5100e-003	0.0423	0.0444	7.0000e-005		2.3500e-003	2.3500e-003		2.1600e-003	2.1600e-003	0.0000	5.8828	5.8828	1.8600e-003	0.0000	5.9295

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	2.4000e-004	1.7000e-004	1.6400e-003	1.0000e-005	4.9000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4695	0.4695	1.0000e-005	0.0000	0.4698
Total	2.4000e-004	1.7000e-004	1.6400e-003	1.0000e-005	4.9000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4695	0.4695	1.0000e-005	0.0000	0.4698

3.6 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	0.0508	0.3697	0.3297	5.5000e-004		0.0199	0.0199		0.0192	0.0192	0.0000	45.3855	45.3855	8.4300e-003	0.0000	45.5962
Total	0.0508	0.3697	0.3297	5.5000e-004		0.0199	0.0199		0.0192	0.0192	0.0000	45.3855	45.3855	8.4300e-003	0.0000	45.5962

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	5.6000e-004	0.0143	3.9600e-003	4.0000e-005	8.2000e-004	7.0000e-005	9.0000e-004	2.4000e-004	7.0000e-005	3.1000e-004	0.0000	3.4049	3.4049	1.8000e-004	0.0000	3.4094
Worker	1.1800e-003	8.3000e-004	8.1800e-003	3.0000e-005	2.5800e-003	2.0000e-005	2.6000e-003	6.9000e-004	2.0000e-005	7.0000e-004	0.0000	2.3476	2.3476	6.0000e-005	0.0000	2.3491
Total	1.7400e-003	0.0151	0.0121	7.0000e-005	3.4000e-003	9.0000e-005	3.5000e-003	9.3000e-004	9.0000e-005	1.0100e-003	0.0000	5.7525	5.7525	2.4000e-004	0.0000	5.7585

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	0.0508	0.3697	0.3297	5.5000e-004		0.0199	0.0199		0.0192	0.0192	0.0000	45.3855	45.3855	8.4300e-003	0.0000	45.5961
Total	0.0508	0.3697	0.3297	5.5000e-004		0.0199	0.0199		0.0192	0.0192	0.0000	45.3855	45.3855	8.4300e-003	0.0000	45.5961

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	5.6000e-004	0.0143	3.9600e-003	4.0000e-005	7.9000e-004	7.0000e-005	8.6000e-004	2.3000e-004	7.0000e-005	3.0000e-004	0.0000	3.4049	3.4049	1.8000e-004	0.0000	3.4094
Worker	1.1800e-003	8.3000e-004	8.1800e-003	3.0000e-005	2.4500e-003	2.0000e-005	2.4600e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.3476	2.3476	6.0000e-005	0.0000	2.3491

Total	1.7400e-003	0.0151	0.0121	7.0000e-005	3.2400e-003	9.0000e-005	3.3200e-003	8.8000e-004	9.0000e-005	9.7000e-004	0.0000	5.7525	5.7525	2.4000e-004	0.0000	5.7585
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3.6 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	0.1359	1.0227	0.9675	1.6500e-003		0.0513	0.0513		0.0496	0.0496	0.0000	136.1607	136.1607	0.0243	0.0000	136.7684
Total	0.1359	1.0227	0.9675	1.6500e-003		0.0513	0.0513		0.0496	0.0496	0.0000	136.1607	136.1607	0.0243	0.0000	136.7684

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	1.3900e-003	0.0385	0.0106	1.1000e-004	2.4700e-003	9.0000e-005	2.5700e-003	7.1000e-004	9.0000e-005	8.1000e-004	0.0000	10.1218	10.1218	5.2000e-004	0.0000	10.1347
Worker	3.2800e-003	2.2200e-003	0.0223	8.0000e-005	7.7400e-003	5.0000e-005	7.7900e-003	2.0600e-003	5.0000e-005	2.1100e-003	0.0000	6.7939	6.7939	1.6000e-004	0.0000	6.7978
Total	4.6700e-003	0.0407	0.0329	1.9000e-004	0.0102	1.4000e-004	0.0104	2.7700e-003	1.4000e-004	2.9200e-003	0.0000	16.9157	16.9157	6.8000e-004	0.0000	16.9325

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	0.1359	1.0227	0.9675	1.6500e-003		0.0513	0.0513		0.0496	0.0496	0.0000	136.1606	136.1606	0.0243	0.0000	136.7683
Total	0.1359	1.0227	0.9675	1.6500e-003		0.0513	0.0513		0.0496	0.0496	0.0000	136.1606	136.1606	0.0243	0.0000	136.7683

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	1.3900e-003	0.0385	0.0106	1.1000e-004	2.3700e-003	9.0000e-005	2.4600e-003	6.9000e-004	9.0000e-005	7.8000e-004	0.0000	10.1218	10.1218	5.2000e-004	0.0000	10.1347
Worker	3.2800e-003	2.2200e-003	0.0223	8.0000e-005	7.3400e-003	5.0000e-005	7.3900e-003	1.9600e-003	5.0000e-005	2.0100e-003	0.0000	6.7939	6.7939	1.6000e-004	0.0000	6.7978
Total	4.6700e-003	0.0407	0.0329	1.9000e-004	9.7100e-003	1.4000e-004	9.8500e-003	2.6500e-003	1.4000e-004	2.7900e-003	0.0000	16.9157	16.9157	6.8000e-004	0.0000	16.9325

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	0.0574					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	0.0695	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670

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	5.6000e-004	3.8000e-004	3.7800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1497	1.1497	3.0000e-005	0.0000	1.1504
Total	5.6000e-004	3.8000e-004	3.7800e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1497	1.1497	3.0000e-005	0.0000	1.1504

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	0.0574					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	0.0695	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670

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	5.6000e-004	3.8000e-004	3.7800e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1497	1.1497	3.0000e-005	0.0000	1.1504
Total	5.6000e-004	3.8000e-004	3.7800e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2500e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1497	1.1497	3.0000e-005	0.0000	1.1504

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	9.4200e-003	0.0567	0.1077	4.4000e-004	0.0351	3.7000e-004	0.0355	9.4100e-003	3.5000e-004	9.7600e-003	0.0000	40.3651	40.3651	1.6500e-003	0.0000	40.4064
Unmitigated	9.4200e-003	0.0567	0.1077	4.4000e-004	0.0351	3.7000e-004	0.0355	9.4100e-003	3.5000e-004	9.7600e-003	0.0000	40.3651	40.3651	1.6500e-003	0.0000	40.4064

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	15.32	15.32	15.32	47,938	47,938
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	14.70	14.70	14.70	46,006	46,006
Total	30.02	30.02	30.02	93,945	93,945

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	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
Manufacturing	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992
Parking Lot	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992
Unrefrigerated Warehouse-No Rail	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					

Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5.2499	5.2499	8.9000e-004	1.8000e-004	5.3271
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5.2499	5.2499	8.9000e-004	1.8000e-004	5.3271
NaturalGas Mitigated	8.3000e-004	7.5900e-003	6.3700e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.2602	8.2602	1.6000e-004	1.5000e-004	8.3093
NaturalGas Unmitigated	8.3000e-004	7.5900e-003	6.3700e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	8.2602	8.2602	1.6000e-004	1.5000e-004	8.3093

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					
Manufacturing	137440	7.4000e-004	6.7400e-003	5.6600e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3343	7.3343	1.4000e-004	1.3000e-004	7.3779
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	17350	9.0000e-005	8.5000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9259	0.9259	2.0000e-005	2.0000e-005	0.9314
Total		8.3000e-004	7.5900e-003	6.3700e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.2602	8.2602	1.6000e-004	1.5000e-004	8.3093

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					
Manufacturing	137440	7.4000e-004	6.7400e-003	5.6600e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.3343	7.3343	1.4000e-004	1.3000e-004	7.3779
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	17350	9.0000e-005	8.5000e-004	7.1000e-004	1.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.9259	0.9259	2.0000e-005	2.0000e-005	0.9314

Total		8.3000e-004	7.5900e-003	6.3700e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.2602	8.2602	1.6000e-004	1.5000e-004	8.3093
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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	43034.6	3.3380	5.7000e-004	1.2000e-004	3.3870
Parking Lot	7000	0.5430	9.0000e-005	2.0000e-005	0.5509
Unrefrigerated Warehouse-No	17650	1.3690	2.3000e-004	5.0000e-005	1.3891
Total		5.2499	8.9000e-004	1.9000e-004	5.3271

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	43034.6	3.3380	5.7000e-004	1.2000e-004	3.3870
Parking Lot	7000	0.5430	9.0000e-005	2.0000e-005	0.5509
Unrefrigerated Warehouse-No	17650	1.3690	2.3000e-004	5.0000e-005	1.3891
Total		5.2499	8.9000e-004	1.9000e-004	5.3271

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	0.0469	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Unmitigated	0.0469	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004

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	5.7400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0412					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Total	0.0469	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004

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	5.7400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0412					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Total	0.0469	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.7400	0.0771	1.8500e-003	4.2193
Unmitigated	1.7400	0.0771	1.8500e-003	4.2193

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	1.20481 / 0	0.8879	0.0393	9.4000e-004	2.1530
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	1.15625 / 0	0.8521	0.0378	9.1000e-004	2.0663
Total		1.7400	0.0771	1.8500e-003	4.2193

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	1.20481 / 0	0.8879	0.0393	9.4000e-004	2.1530
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	1.15625 / 0	0.8521	0.0378	9.1000e-004	2.0663
Total		1.7400	0.0771	1.8500e-003	4.2193

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.1327	0.0669	0.0000	2.8062
Unmitigated	2.2654	0.1339	0.0000	5.6124

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	6.46	1.3113	0.0775	0.0000	3.2487
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Refrigerant	4.7	0.9541	0.0564	0.0000	2.3636
Total		2.2654	0.1339	0.0000	5.6124

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Manufacturing	3.23	0.6557	0.0388	0.0000	1.6244
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No	2.35	0.4770	0.0282	0.0000	1.1818
Total		1.1327	0.0669	0.0000	2.8062

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Manufacturing- Rio Vista - Solano-San Francisco County, Summer

Manufacturing- Rio Vista
Solano-San Francisco County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	5.21	1000sqft	0.20	5,210.00	0
Parking Lot	20.00	1000sqft	1.00	20,000.00	0
Unrefrigerated Warehouse-No Rail	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	171	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor updated per PG&E 2019 CRSR Report

Land Use - Parking lot includes paved areas for fire access

Construction Phase - Anticipated construction schedule

Demolition - No demolition

Grading - Calculated removing top 3 inches of the entire 1.24 acre site. Therefore, approx. 510 cy would be exported and approx. 510 cy would be imported

Vehicle Trips - Estimated trips generated based on 5 employees and 10 vendor/delivery trucks

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - basic control measures

Waste Mitigation -

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	110.00
tblConstructionPhase	PhaseEndDate	1/28/2021	9/30/2020
tblConstructionPhase	PhaseEndDate	2/1/2021	10/2/2020
tblConstructionPhase	PhaseEndDate	2/5/2021	10/8/2020
tblConstructionPhase	PhaseEndDate	11/26/2021	10/22/2020
tblConstructionPhase	PhaseEndDate	11/12/2021	7/29/2021
tblConstructionPhase	PhaseEndDate	12/10/2021	7/30/2021
tblConstructionPhase	PhaseStartDate	1/1/2021	10/1/2020
tblConstructionPhase	PhaseStartDate	1/29/2021	10/1/2020
tblConstructionPhase	PhaseStartDate	2/2/2021	10/3/2020
tblConstructionPhase	PhaseStartDate	11/13/2021	10/9/2020
tblConstructionPhase	PhaseStartDate	2/6/2021	10/23/2020
tblConstructionPhase	PhaseStartDate	11/27/2021	3/1/2021
tblGrading	MaterialExported	0.00	510.00
tblGrading	MaterialImported	0.00	510.00
tblLandUse	LotAcreage	0.12	0.20
tblLandUse	LotAcreage	0.46	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	171
tblVehicleTrips	DV_TP	5.00	0.00

tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.49	2.94
tblVehicleTrips	ST_TR	1.68	2.94
tblVehicleTrips	SU_TR	0.62	2.94
tblVehicleTrips	SU_TR	1.68	2.94
tblVehicleTrips	WD_TR	3.82	2.94
tblVehicleTrips	WD_TR	1.68	2.94

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	2.1033	23.7474	13.6979	0.0407	5.8653	1.1532	6.6867	2.9711	1.0768	3.7268	0.0000	4,165.8028	4,165.8028	0.5449	0.0000	4,179.4258
2021	3.1513	15.7020	15.2539	0.0278	0.1653	0.7805	0.9459	0.0446	0.7569	0.8015	0.0000	2,566.5509	2,566.5509	0.3869	0.0000	2,576.2231
Maximum	3.1513	23.7474	15.2539	0.0407	5.8653	1.1532	6.6867	2.9711	1.0768	3.7268	0.0000	4,165.8028	4,165.8028	0.5449	0.0000	4,179.4258

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	2.1033	23.7474	13.6979	0.0407	2.7106	1.1532	3.4258	1.2793	1.0768	2.0350	0.0000	4,165.8028	4,165.8028	0.5449	0.0000	4,179.4258
2021	3.1513	15.7020	15.2539	0.0278	0.1570	0.7805	0.9376	0.0426	0.7569	0.7995	0.0000	2,566.5509	2,566.5509	0.3869	0.0000	2,576.2231
Maximum	3.1513	23.7474	15.2539	0.0407	2.7106	1.1532	3.4258	1.2793	1.0768	2.0350	0.0000	4,165.8028	4,165.8028	0.5449	0.0000	4,179.4258

	ROG	NOx	CO	SO2	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	52.45	0.00	42.83	56.17	0.00	37.41	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	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Energy	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884
Mobile	0.0595	0.3023	0.6291	2.5600e-003	0.1995	2.0400e-003	0.2016	0.0533	1.9100e-003	0.0552		259.4549	259.4549	0.0100		259.7056
Total	0.3214	0.3439	0.6671	2.8100e-003	0.1995	5.2100e-003	0.2047	0.0533	5.0800e-003	0.0584		309.3535	309.3535	0.0110	9.1000e-004	309.9011

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	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Energy	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884
Mobile	0.0595	0.3023	0.6291	2.5600e-003	0.1995	2.0400e-003	0.2016	0.0533	1.9100e-003	0.0552		259.4549	259.4549	0.0100		259.7056
Total	0.3214	0.3439	0.6671	2.8100e-003	0.1995	5.2100e-003	0.2047	0.0533	5.0800e-003	0.0584		309.3535	309.3535	0.0110	9.1000e-004	309.9011

	ROG	NOx	CO	SO2	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	Demolition	Demolition	10/1/2020	9/30/2020	5	0	
2	Site Preparation	Site Preparation	10/1/2020	10/2/2020	5	2	
3	Grading	Grading	10/3/2020	10/8/2020	5	4	
4	Paving	Paving	10/9/2020	10/22/2020	5	10	
5	Building Construction	Building Construction	10/23/2020	7/29/2021	5	200	
6	Architectural Coating	Architectural Coating	3/1/2021	7/30/2021	5	110	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,315; Non-Residential Outdoor: 5,105; Striped Parking Area:

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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	128.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	13.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	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 - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

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					

Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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3.3 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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	1.6299	18.3464	7.7093	0.0172	5.7996	0.8210	6.6205	2.9537	0.7553	3.7090		1,667.4119	1,667.4119	0.5393		1,680.8937

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	0.0314	0.0182	0.2227	6.9000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		68.9859	68.9859	1.7300e-003		69.0290
Total	0.0314	0.0182	0.2227	6.9000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		68.9859	68.9859	1.7300e-003		69.0290

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					2.4793	0.0000	2.4793	1.2627	0.0000	1.2627			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	1.6299	18.3464	7.7093	0.0172	2.4793	0.8210	3.3003	1.2627	0.7553	2.0180	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937

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	0.0314	0.0182	0.2227	6.9000e-004	0.0623	4.4000e-004	0.0627	0.0166	4.1000e-004	0.0170		68.9859	68.9859	1.7300e-003		69.0290
Total	0.0314	0.0182	0.2227	6.9000e-004	0.0623	4.4000e-004	0.0627	0.0166	4.1000e-004	0.0170		68.9859	68.9859	1.7300e-003		69.0290

3.4 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					4.9431	0.0000	4.9431	2.5300	0.0000	2.5300			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	1.3498	15.0854	6.4543	0.0141	4.9431	0.6844	5.6275	2.5300	0.6296	3.1596		1,365.7183	1,365.7183	0.4417		1,376.7609

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	0.2600	8.6438	1.4518	0.0260	0.5606	0.0304	0.5909	0.1537	0.0291	0.1828		2,731.0986	2,731.0986	0.1015		2,733.6360
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	0.0314	0.0182	0.2227	6.9000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		68.9859	68.9859	1.7300e-003		69.0290
Total	0.2914	8.6620	1.6745	0.0266	0.6263	0.0308	0.6571	0.1712	0.0295	0.2006		2,800.0844	2,800.0844	0.1032		2,802.6650

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					2.1132	0.0000	2.1132	1.0816	0.0000	1.0816			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	1.3498	15.0854	6.4543	0.0141	2.1132	0.6844	2.7976	1.0816	0.6296	1.7112	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609

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	0.2600	8.6438	1.4518	0.0260	0.5352	0.0304	0.5655	0.1475	0.0291	0.1766		2,731.0986	2,731.0986	0.1015		2,733.6360
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	0.0314	0.0182	0.2227	6.9000e-004	0.0623	4.4000e-004	0.0627	0.0166	4.1000e-004	0.0170		68.9859	68.9859	1.7300e-003		69.0290
Total	0.2914	8.6620	1.6745	0.0266	0.5975	0.0308	0.6283	0.1641	0.0295	0.1936		2,800.0844	2,800.0844	0.1032		2,802.6650

3.5 Paving - 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	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.2620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1022	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246

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	0.0510	0.0296	0.3618	1.1200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		112.1020	112.1020	2.8100e-003		112.1722
Total	0.0510	0.0296	0.3618	1.1200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		112.1020	112.1020	2.8100e-003		112.1722

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	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.2620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1022	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246

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	0.0510	0.0296	0.3618	1.1200e-003	0.1012	7.2000e-004	0.1019	0.0270	6.6000e-004	0.0276		112.1020	112.1020	2.8100e-003		112.1722
Total	0.0510	0.0296	0.3618	1.1200e-003	0.1012	7.2000e-004	0.1019	0.0270	6.6000e-004	0.0276		112.1020	112.1020	2.8100e-003		112.1722

3.6 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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

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	0.0218	0.5616	0.1480	1.4500e-003	0.0339	2.9600e-003	0.0369	9.7600e-003	2.8300e-003	0.0126		152.1679	152.1679	7.6700e-003		152.3597
Worker	0.0510	0.0296	0.3618	1.1200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		112.1020	112.1020	2.8100e-003		112.1722
Total	0.0728	0.5911	0.5099	2.5700e-003	0.1407	3.6800e-003	0.1444	0.0381	3.4900e-003	0.0416		264.2699	264.2699	0.0105		264.5318

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467

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	0.0218	0.5616	0.1480	1.4500e-003	0.0324	2.9600e-003	0.0354	9.4000e-003	2.8300e-003	0.0122		152.1679	152.1679	7.6700e-003		152.3597
Worker	0.0510	0.0296	0.3618	1.1200e-003	0.1012	7.2000e-004	0.1019	0.0270	6.6000e-004	0.0276		112.1020	112.1020	2.8100e-003		112.1722
Total	0.0728	0.5911	0.5099	2.5700e-003	0.1337	3.6800e-003	0.1373	0.0364	3.4900e-003	0.0399		264.2699	264.2699	0.0105		264.5318

3.6 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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517

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	0.0181	0.5066	0.1308	1.4400e-003	0.0339	1.2400e-003	0.0351	9.7600e-003	1.1900e-003	0.0109		150.7895	150.7895	7.2200e-003		150.9700
Worker	0.0472	0.0264	0.3301	1.0800e-003	0.1068	7.0000e-004	0.1075	0.0283	6.4000e-004	0.0290		108.1383	108.1383	2.5100e-003		108.2010
Total	0.0652	0.5330	0.4608	2.5200e-003	0.1407	1.9400e-003	0.1426	0.0381	1.8300e-003	0.0399		258.9278	258.9278	9.7300e-003		259.1710

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517

Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
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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	0.0181	0.5066	0.1308	1.4400e-003	0.0324	1.2400e-003	0.0337	9.4000e-003	1.1900e-003	0.0106		150.7895	150.7895	7.2200e-003		150.9700
Worker	0.0472	0.0264	0.3301	1.0800e-003	0.1012	7.0000e-004	0.1019	0.0270	6.4000e-004	0.0276		108.1383	108.1383	2.5100e-003		108.2010
Total	0.0652	0.5330	0.4608	2.5200e-003	0.1337	1.9400e-003	0.1356	0.0364	1.8300e-003	0.0382		258.9278	258.9278	9.7300e-003		259.1710

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	1.0438					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	1.2627	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

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	0.0109	6.0900e-003	0.0762	2.5000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		24.9550	24.9550	5.8000e-004			24.9695
Total	0.0109	6.0900e-003	0.0762	2.5000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		24.9550	24.9550	5.8000e-004			24.9695

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	1.0438					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	1.2627	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

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
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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		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
Worker	0.0109	6.0900e-003	0.0762	2.5000e-004	0.0234	1.6000e-004	0.0235	6.2200e-003	1.5000e-004	6.3700e-003		24.9550	24.9550	5.8000e-004		24.9695
Total	0.0109	6.0900e-003	0.0762	2.5000e-004	0.0234	1.6000e-004	0.0235	6.2200e-003	1.5000e-004	6.3700e-003		24.9550	24.9550	5.8000e-004		24.9695

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	0.0595	0.3023	0.6291	2.5600e-003	0.1995	2.0400e-003	0.2016	0.0533	1.9100e-003	0.0552		259.4549	259.4549	0.0100		259.7056
Unmitigated	0.0595	0.3023	0.6291	2.5600e-003	0.1995	2.0400e-003	0.2016	0.0533	1.9100e-003	0.0552		259.4549	259.4549	0.0100		259.7056

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	15.32	15.32	15.32	47,938	47,938
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	14.70	14.70	14.70	46,006	46,006
Total	30.02	30.02	30.02	93,945	93,945

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	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
Manufacturing	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992
Parking Lot	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992
Unrefrigerated Warehouse-No	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
	lb/day										lb/day						
NaturalGas Mitigated	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003			49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884
NaturalGas Unmitigated	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003			49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas 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					
Manufacturing	376.547	4.0600e-003	0.0369	0.0310	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003		44.2997	44.2997	8.5000e-004	8.1000e-004	44.5629
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 Pail	47.5342	5.1000e-004	4.6600e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5923	5.5923	1.1000e-004	1.0000e-004	5.6255
Total		4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884

Mitigated

	Natural Gas 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					
Manufacturing	0.376547	4.0600e-003	0.0369	0.0310	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003		44.2997	44.2997	8.5000e-004	8.1000e-004	44.5629
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 Pail	0.0475342	5.1000e-004	4.6600e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5923	5.5923	1.1000e-004	1.0000e-004	5.6255
Total		4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884

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	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Unmitigated	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-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	0.0315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2256					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Total	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003

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	0.0315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2256					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Total	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Manufacturing- Rio Vista - Solano-San Francisco County, Winter

Manufacturing- Rio Vista
Solano-San Francisco County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	5.21	1000sqft	0.20	5,210.00	0
Parking Lot	20.00	1000sqft	1.00	20,000.00	0
Unrefrigerated Warehouse-No Rail	5.00	1000sqft	0.11	5,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	56
Climate Zone	4			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	171	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor updated per PG&E 2019 CRSR Report

Land Use - Parking lot includes paved areas for fire access

Construction Phase - Anticipated construction schedule

Demolition - No demolition

Grading - Calculated removing top 3 inches of the entire 1.24 acre site. Therefore, approx. 510 cy would be exported and approx. 510 cy would be imported

Vehicle Trips - Estimated trips generated based on 5 employees and 10 vendor/delivery trucks

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - basic control measures

Waste Mitigation -

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	110.00
tblConstructionPhase	PhaseEndDate	1/28/2021	9/30/2020
tblConstructionPhase	PhaseEndDate	2/1/2021	10/2/2020
tblConstructionPhase	PhaseEndDate	2/5/2021	10/8/2020
tblConstructionPhase	PhaseEndDate	11/26/2021	10/22/2020
tblConstructionPhase	PhaseEndDate	11/12/2021	7/29/2021
tblConstructionPhase	PhaseEndDate	12/10/2021	7/30/2021
tblConstructionPhase	PhaseStartDate	1/1/2021	10/1/2020
tblConstructionPhase	PhaseStartDate	1/29/2021	10/1/2020
tblConstructionPhase	PhaseStartDate	2/2/2021	10/3/2020
tblConstructionPhase	PhaseStartDate	11/13/2021	10/9/2020
tblConstructionPhase	PhaseStartDate	2/6/2021	10/23/2020
tblConstructionPhase	PhaseStartDate	11/27/2021	3/1/2021
tblGrading	MaterialExported	0.00	510.00
tblGrading	MaterialImported	0.00	510.00
tblLandUse	LotAcreage	0.12	0.20
tblLandUse	LotAcreage	0.46	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	171
tblVehicleTrips	DV_TP	5.00	0.00

tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.49	2.94
tblVehicleTrips	ST_TR	1.68	2.94
tblVehicleTrips	SU_TR	0.62	2.94
tblVehicleTrips	SU_TR	1.68	2.94
tblVehicleTrips	WD_TR	3.82	2.94
tblVehicleTrips	WD_TR	1.68	2.94

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	2.1053	23.9893	13.6996	0.0401	5.8653	1.1532	6.6867	2.9711	1.0768	3.7268	0.0000	4,098.5294	4,098.5294	0.5554	0.0000	4,112.4142
2021	3.1534	15.7158	15.2495	0.0276	0.1653	0.7806	0.9459	0.0446	0.7569	0.8016	0.0000	2,549.4415	2,549.4415	0.3875	0.0000	2,559.1287
Maximum	3.1534	23.9893	15.2495	0.0401	5.8653	1.1532	6.6867	2.9711	1.0768	3.7268	0.0000	4,098.5294	4,098.5294	0.5554	0.0000	4,112.4142

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	2.1053	23.9893	13.6996	0.0401	2.7106	1.1532	3.4265	1.2793	1.0768	2.0350	0.0000	4,098.5294	4,098.5294	0.5554	0.0000	4,112.4142
2021	3.1534	15.7158	15.2495	0.0276	0.1570	0.7806	0.9376	0.0426	0.7569	0.7995	0.0000	2,549.4415	2,549.4415	0.3875	0.0000	2,559.1287
Maximum	3.1534	23.9893	15.2495	0.0401	2.7106	1.1532	3.4265	1.2793	1.0768	2.0350	0.0000	4,098.5294	4,098.5294	0.5554	0.0000	4,112.4142

	ROG	NOx	CO	SO2	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	52.45	0.00	42.82	56.17	0.00	37.41	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	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Energy	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884
Mobile	0.0506	0.3171	0.6253	2.3700e-003	0.1995	2.0600e-003	0.2016	0.0533	1.9400e-003	0.0553		240.5067	240.5067	0.0103		240.7651
Total	0.3125	0.3587	0.6633	2.6200e-003	0.1995	5.2300e-003	0.2047	0.0533	5.1100e-003	0.0584		290.4053	290.4053	0.0113	9.1000e-004	290.9606

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	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Energy	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884
Mobile	0.0506	0.3171	0.6253	2.3700e-003	0.1995	2.0600e-003	0.2016	0.0533	1.9400e-003	0.0553		240.5067	240.5067	0.0103		240.7651
Total	0.3125	0.3587	0.6633	2.6200e-003	0.1995	5.2300e-003	0.2047	0.0533	5.1100e-003	0.0584		290.4053	290.4053	0.0113	9.1000e-004	290.9606

	ROG	NOx	CO	SO2	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	Demolition	Demolition	10/1/2020	9/30/2020	5	0	
2	Site Preparation	Site Preparation	10/1/2020	10/2/2020	5	2	
3	Grading	Grading	10/3/2020	10/8/2020	5	4	
4	Paving	Paving	10/9/2020	10/22/2020	5	10	
5	Building Construction	Building Construction	10/23/2020	7/29/2021	5	200	
6	Architectural Coating	Architectural Coating	3/1/2021	7/30/2021	5	110	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 15,315; Non-Residential Outdoor: 5,105; Striped Parking Area:

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	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	128.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	13.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	3.00	0.00	0.00	10.80	7.30	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 - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							

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					

Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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3.3 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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553		1,667.4119	1,667.4119	0.5393		1,680.8937
Total	1.6299	18.3464	7.7093	0.0172	5.7996	0.8210	6.6205	2.9537	0.7553	3.7090		1,667.4119	1,667.4119	0.5393		1,680.8937

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	0.0318	0.0230	0.2083	6.3000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		62.6146	62.6146	1.5900e-003		62.6544
Total	0.0318	0.0230	0.2083	6.3000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		62.6146	62.6146	1.5900e-003		62.6544

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					2.4793	0.0000	2.4793	1.2627	0.0000	1.2627			0.0000			0.0000
Off-Road	1.6299	18.3464	7.7093	0.0172		0.8210	0.8210		0.7553	0.7553	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937
Total	1.6299	18.3464	7.7093	0.0172	2.4793	0.8210	3.3003	1.2627	0.7553	2.0180	0.0000	1,667.4119	1,667.4119	0.5393		1,680.8937

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	0.0318	0.0230	0.2083	6.3000e-004	0.0623	4.4000e-004	0.0627	0.0166	4.1000e-004	0.0170		62.6146	62.6146	1.5900e-003		62.6544
Total	0.0318	0.0230	0.2083	6.3000e-004	0.0623	4.4000e-004	0.0627	0.0166	4.1000e-004	0.0170		62.6146	62.6146	1.5900e-003		62.6544

3.4 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					4.9431	0.0000	4.9431	2.5300	0.0000	2.5300			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296		1,365.7183	1,365.7183	0.4417		1,376.7609
Total	1.3498	15.0854	6.4543	0.0141	4.9431	0.6844	5.6275	2.5300	0.6296	3.1596		1,365.7183	1,365.7183	0.4417		1,376.7609

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	0.2692	8.8810	1.6237	0.0254	0.5606	0.0310	0.5916	0.1537	0.0297	0.1834		2,670.1965	2,670.1965	0.1121		2,672.9990
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	0.0318	0.0230	0.2083	6.3000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		62.6146	62.6146	1.5900e-003		62.6544
Total	0.3010	8.9040	1.8320	0.0260	0.6263	0.0315	0.6578	0.1712	0.0301	0.2013		2,732.8111	2,732.8111	0.1137		2,735.6534

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					2.1132	0.0000	2.1132	1.0816	0.0000	1.0816			0.0000			0.0000
Off-Road	1.3498	15.0854	6.4543	0.0141		0.6844	0.6844		0.6296	0.6296	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609
Total	1.3498	15.0854	6.4543	0.0141	2.1132	0.6844	2.7976	1.0816	0.6296	1.7112	0.0000	1,365.7183	1,365.7183	0.4417		1,376.7609

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	0.2692	8.8810	1.6237	0.0254	0.5352	0.0310	0.5662	0.1475	0.0297	0.1772		2,670.1965	2,670.1965	0.1121		2,672.9990
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	0.0318	0.0230	0.2083	6.3000e-004	0.0623	4.4000e-004	0.0627	0.0166	4.1000e-004	0.0170		62.6146	62.6146	1.5900e-003		62.6544
Total	0.3010	8.9040	1.8320	0.0260	0.5975	0.0315	0.6289	0.1641	0.0301	0.1942		2,732.8111	2,732.8111	0.1137		2,735.6534

3.5 Paving - 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	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.2620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1022	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328		1,296.9461	1,296.9461	0.4111		1,307.2246

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	0.0517	0.0374	0.3385	1.0200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		101.7486	101.7486	2.5900e-003		101.8134
Total	0.0517	0.0374	0.3385	1.0200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		101.7486	101.7486	2.5900e-003		101.8134

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	0.8402	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246
Paving	0.2620					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1022	8.4514	8.8758	0.0135		0.4695	0.4695		0.4328	0.4328	0.0000	1,296.9461	1,296.9461	0.4111		1,307.2246

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	0.0517	0.0374	0.3385	1.0200e-003	0.1012	7.2000e-004	0.1019	0.0270	6.6000e-004	0.0276		101.7486	101.7486	2.5900e-003		101.8134
Total	0.0517	0.0374	0.3385	1.0200e-003	0.1012	7.2000e-004	0.1019	0.0270	6.6000e-004	0.0276		101.7486	101.7486	2.5900e-003		101.8134

3.6 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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688		2,001.1595	2,001.1595	0.3715		2,010.4467

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	0.0231	0.5693	0.1730	1.4100e-003	0.0339	3.0200e-003	0.0369	9.7600e-003	2.8900e-003	0.0127		147.3168	147.3168	8.5400e-003		147.5304
Worker	0.0517	0.0374	0.3385	1.0200e-003	0.1068	7.2000e-004	0.1075	0.0283	6.6000e-004	0.0290		101.7486	101.7486	2.5900e-003		101.8134
Total	0.0748	0.6067	0.5116	2.4300e-003	0.1407	3.7400e-003	0.1444	0.0381	3.5500e-003	0.0416		249.0655	249.0655	0.0111		249.3438

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	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467
Total	2.0305	14.7882	13.1881	0.0220		0.7960	0.7960		0.7688	0.7688	0.0000	2,001.1595	2,001.1595	0.3715		2,010.4467

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	0.0231	0.5693	0.1730	1.4100e-003	0.0324	3.0200e-003	0.0355	9.4000e-003	2.8900e-003	0.0123		147.3168	147.3168	8.5400e-003		147.5304
Worker	0.0517	0.0374	0.3385	1.0200e-003	0.1012	7.2000e-004	0.1019	0.0270	6.6000e-004	0.0276		101.7486	101.7486	2.5900e-003		101.8134
Total	0.0748	0.6067	0.5116	2.4300e-003	0.1337	3.7400e-003	0.1374	0.0364	3.5500e-003	0.0399		249.0655	249.0655	0.0111		249.3438

3.6 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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517
Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608		2,001.2200	2,001.2200	0.3573		2,010.1517

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	0.0193	0.5119	0.1542	1.4000e-003	0.0339	1.2900e-003	0.0352	9.7600e-003	1.2300e-003	0.0110		145.9713	145.9713	8.0600e-003		146.1728
Worker	0.0478	0.0333	0.3075	9.8000e-004	0.1068	7.0000e-004	0.1075	0.0283	6.4000e-004	0.0290		98.1518	98.1518	2.3100e-003		98.2095
Total	0.0671	0.5452	0.4616	2.3800e-003	0.1407	1.9900e-003	0.1427	0.0381	1.8700e-003	0.0400		244.1231	244.1231	0.0104		244.3823

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	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517

Total	1.8125	13.6361	12.8994	0.0221		0.6843	0.6843		0.6608	0.6608	0.0000	2,001.2200	2,001.2200	0.3573		2,010.1517
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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	0.0193	0.5119	0.1542	1.4000e-003	0.0324	1.2900e-003	0.0337	9.4000e-003	1.2300e-003	0.0106		145.9713	145.9713	8.0600e-003		146.1728
Worker	0.0478	0.0333	0.3075	9.8000e-004	0.1012	7.0000e-004	0.1019	0.0270	6.4000e-004	0.0276		98.1518	98.1518	2.3100e-003		98.2095
Total	0.0671	0.5452	0.4616	2.3800e-003	0.1337	1.9900e-003	0.1357	0.0364	1.8700e-003	0.0382		244.1231	244.1231	0.0104		244.3823

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	1.0438					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	1.2627	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

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	0.0110	7.6900e-003	0.0710	2.3000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		22.6504	22.6504	5.3000e-004		22.6637
Total	0.0110	7.6900e-003	0.0710	2.3000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003		22.6504	22.6504	5.3000e-004		22.6637

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	1.0438					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	1.2627	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

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
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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	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	0.0110	7.6900e-003	0.0710	2.3000e-004	0.0234	1.6000e-004	0.0235	6.2200e-003	1.5000e-004	6.3700e-003	0.0000	22.6504	22.6504	5.3000e-004	0.0000	22.6637
Total	0.0110	7.6900e-003	0.0710	2.3000e-004	0.0234	1.6000e-004	0.0235	6.2200e-003	1.5000e-004	6.3700e-003	0.0000	22.6504	22.6504	5.3000e-004	0.0000	22.6637

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	0.0506	0.3171	0.6253	2.3700e-003	0.1995	2.0600e-003	0.2016	0.0533	1.9400e-003	0.0553	0.0000	240.5067	240.5067	0.0103	0.0000	240.7651
Unmitigated	0.0506	0.3171	0.6253	2.3700e-003	0.1995	2.0600e-003	0.2016	0.0533	1.9400e-003	0.0553	0.0000	240.5067	240.5067	0.0103	0.0000	240.7651

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	15.32	15.32	15.32	47,938	47,938
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	14.70	14.70	14.70	46,006	46,006
Total	30.02	30.02	30.02	93,945	93,945

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	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
Manufacturing	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992
Parking Lot	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992
Unrefrigerated Warehouse-No	0.588536	0.035986	0.174552	0.110216	0.018118	0.005345	0.009428	0.044315	0.003262	0.002178	0.006461	0.000611	0.000992

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
	lb/day										lb/day						
NaturalGas Mitigated	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003			49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884
NaturalGas Unmitigated	4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003			49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas 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					
Manufacturing	376.547	4.0600e-003	0.0369	0.0310	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003		44.2997	44.2997	8.5000e-004	8.1000e-004	44.5629
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 Pail	47.5342	5.1000e-004	4.6600e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5923	5.5923	1.1000e-004	1.0000e-004	5.6255
Total		4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884

Mitigated

	Natural Gas 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					
Manufacturing	0.376547	4.0600e-003	0.0369	0.0310	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003		44.2997	44.2997	8.5000e-004	8.1000e-004	44.5629
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 Pail	0.0475342	5.1000e-004	4.6600e-003	3.9100e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004		5.5923	5.5923	1.1000e-004	1.0000e-004	5.6255
Total		4.5700e-003	0.0416	0.0349	2.5000e-004		3.1600e-003	3.1600e-003		3.1600e-003	3.1600e-003		49.8920	49.8920	9.6000e-004	9.1000e-004	50.1884

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	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Unmitigated	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-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	0.0315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2256					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Total	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003

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	0.0315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2256					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003
Total	0.2573	3.0000e-005	3.0900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.6100e-003	6.6100e-003	2.0000e-005		7.0500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Appendix B
Rio Vista Manufacturing Biological Memo

MEMORANDUM

To: Rio Vista Manufacturing Inc.

From: Brad Stoneman, Project Manager, Kimley-Horn
Marcy Kamerath, Environmental Scientist, Kimley-Horn
Kimley-Horn and Associates, Inc.

Date: August 18, 2020

Subject: Rio Vista Manufacturing Project – Biological Resources Technical Memorandum

1.0 PURPOSE

The purpose of this memorandum is to identify the biological resources and habitats associated with the proposed Rio Vista Manufacturing Project (project), located in the City of Rio Vista, California. A review of biological resources was undertaken to analyze whether the proposed project would result in potential impacts to biological resources or habitats in order to support review of the project under the California Environmental Quality Act (CEQA).

2.0 PROPOSED PROJECT DESCRIPTION

The proposed project is in the City of Rio Vista in southeastern portion of Solano County, California (Figure 1). The project is located within the U.S. Geological Survey (USGS) Rio Vista Quadrangle. The project site is located at 10 Poppy House Road on a 1.24 acre lot on Assessor parcel number (0178-230-012) (Figure 2). Much of the former buildings and runways have been removed or demolished and the site is designated by the City of Rio Vista (City) for reuse and redevelopment as industrial development and zoned as a Business Park.

The proposed project occurs on previously disturbed but currently undeveloped and unoccupied land. There are no current on-site operations, but the site has experienced vehicle traffic as numerous tire tracks in addition to the dirt road are evident. The project site is on flat ground and has no significant landform features. The project site is level from west to east and slopes slightly downward north to south falling less than a foot over a distance of approximately 175 feet. The balance of the site consists of bare soil and upland, ruderal vegetation. There are no trees or natural landforms such as rock outcroppings or hillsides on the project site. The project site does not contain any stream channels, waterways, standing water, or wetlands.

Surrounding land uses are typically industrial in nature or consist of vacant and undeveloped but previously disturbed land. The adjacent property to the east is developed and used for cannabis cultivation and sales. The concrete pads of the remnant airport facilities, hardscape, and the Rio Vista Police station are located north of the project site. To the west the project site is adjacent to Poppy

Rio Vista Manufacturing Project – Biological Resources Technical Memo

House road and across the street an agricultural warehouse property (Poppy House & California Vegetable Specialties). Stan Simi Drive borders the project to the south and just beyond is the Rio Vista Business Park Storm Basin.

The proposed project includes the construction of an approximate 4,860 sf buildings. The proposed project would occupy the central portion of the site with parking on the west and south adjacent to Poppy House Road and Stan Simi Drive respectively. Adjacent to east side of the building would be the secure and enclosed gas and trash enclosures. A 20' emergency access lane would be located at the southeasterly corner of the site and would ring the site to and through the westerly parking lot at the 26' wide driveway on Poppy House Road.

The proposed project would be used for the manufacture and distribution of cannabis products. The proposed project would not grow any cannabis on-site but would receive processed cannabis from off-site sellers. After processing, the cannabis would be shipped to off-site buyers via a third-party licensed distributor.

The proposed building would be single story industrial prefab metal frame on slab. The building would be approximately 20'0" at the bottom of the roof trusses and pitched in the middle to a maximum height of 24'5". The proposed project would be painted or coated within the manufacturers standard range of options and would be consistent with the colors of surrounding buildings.

The proposed project would operate during normal business hours (8:00 a.m. to 5:00 p.m.) and typically be open from Monday through Friday. The business; however, depending on the amount or times they received shipments of cannabis to process may be open on weekends and employees may be on-site for longer periods of time.

Approximately 10% of the overall lot will be landscaped with drought tolerant species and use a water efficient irrigation system. A pedestrian sidewalk would be located between Poppy House Road and Stan Simi Drive around the site improvements. The main entrance to the proposed project would be located on the westerly side of the structure and would be ADA compliant. All other access points to the structure and interior spaces as required would be ADA compliant.

Construction activities would involve the use of heavy equipment for ground preparation, grading, trenching, staking and flagging, installation and extension of on-site utility systems, and typical industrial building techniques needed to erect the building and improve the interior. Concrete trucks and other paving equipment would be used to construct site improvements.

Existing vegetation would be cleared and grubbed prior to grading. Site grading is not anticipated to reach a depth greater than two feet. Some excavation for utilities may require deeper trenching. Utility line extensions would be limited to the project site and would occur in adjoining areas that have been previously disturbed.

Construction of proposed project is anticipated to begin in late 2020/Early 2021 and last approximately six months.

3.0 METHODS

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

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people;
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

To assess biological resources for the purposes of CEQA, a database review was conducted to identify the potential for special status biological resources to occur in the project vicinity and a field visit was completed.

An official species list was obtained from U.S. Fish and Wildlife Service to identify federally listed species that may occur in the Rio Vista USGS Quad and whether federally-designated critical habitat occurs on the project site. Rare plant records within the Rio Vista USGS Quad were obtained from the California Native Plant Society (CNPS). Last, the California Natural Diversity Database (CNDDDB) was reviewed within a 5-mile radius of the project site to identify recorded observations of state or federal listed species or rare plants. Special status species with potential to occur based on the database review are listed in Tables 1 and 2.

Following the above database review, a site visit was conducted by a biologist on July 22, 2020 to assess the potential for or presence of special status biological resources to occur on site. The results are summarized in Section 5 of this memo.

4.0 REGULATORY SETTING

4.1 Special Status Biological Resources

Special-status biological resources are defined as biological resources protected and/or regulated by federal, state, and/or local laws and policies, and include all species that are:

- listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA);
- listed or candidates for listing as threatened or endangered under the California Endangered Species Act (CESA);
- identified by California Department of Fish and Wildlife (CDFW) as Species of Special Concern;
- listed as Fully Protected under the California Fish and Game Code;
- listed as rare under the California Native Plant Protection Act;
- considered jointly by CDFW and CNPS to be “rare, threatened, or endangered in California” and assigned one of the following California Rare Plant Ranks (CRPR):
 - CRPR 1A - presumed extinct in California;
 - CRPR 1B - rare, threatened, or endangered in California and elsewhere;
 - CRPR 2A - presumed extirpated in California, but more common elsewhere;
 - CRPR 2B - rare threatened, or endangered in California, more common elsewhere;
 - CRPR 3 - Plants About Which More Information is Needed (review list)
- considered a locally significant species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G);
- otherwise meet the definition of rare or endangered under CEQA §15380 (b) and (d).

Special-status biological resources also include Sensitive Natural Communities (SNC) that are identified by CDFW as having a state (S) rarity rank of 1, 2, or 3, where S1 is critically imperiled, S2 is imperiled, and S3 is vulnerable. SNCs have high potential to support special-status plant and animal species. Most types of wetlands and riparian communities are considered SNCs due to their limited distribution in California. Additionally, most of these communities are also subject to regulation by the Corps’ jurisdiction under Section 404 of the Clean Water Act (CWA), by CDFW under Section 1602 of the California Fish and Game Code, and by the Regional Water Quality Control Board under the Porter-Cologne Water Quality Control Act.

4.2 Federal Regulations

4.2.1. Federal Endangered Species Act

The federal Endangered Species Act of 1973 (16 USC 1531–1544), as amended, protects plants, fish, and wildlife that are listed as endangered or threatened by the USFWS or National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries). Section 9 of the FESA prohibits the “take” of listed fish and wildlife, where “take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute prohibits removing, possessing, maliciously damaging, or destroying any listed plant under federal jurisdiction and removing, cutting, digging-up, damaging, or destroying any listed plant in knowing violation of state law (16 United States

Code [USC] 1538). FESA does not protect plants growing on private property, unless state laws are violated in the course of harming the listed plant.

The FESA allows for issuance of incidental take permits to private parties either in conjunction with a Habitat Conservation Plan (HCP) or as part of a Section 7 consultation. Under Section 10 of the FESA, a private party may obtain incidental take coverage by preparing an HCP to cover target species within the proposed project area, identifying impacts to the covered species, and presenting the measures that will be undertaken to avoid, minimize, and mitigate such impacts.

4.2.2. Clean Water Act

The CWA regulates discharge of dredged or fill materials into waters of the U.S., including wetlands. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, developed by the U.S. Environmental Protection Agency (EPA) in conjunction with the U.S. Army Corps of Engineers (USACE) (40 C.F.R. Part 230). The USACE requires a permit if a project proposes placement of structures within navigable waters and/or alterations, including dredge or fill to waters of the U.S. The EPA administers the CWA and can override USACE CWA 404 permit issuance.

Wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands under USACE jurisdiction must demonstrate the presence of three specific wetland parameters: hydric soils, hydrophytic vegetation, and sufficient wetland hydrology. Generally, wetlands include swamps, marshes, bogs, and similar areas. Lakes, rivers, and streams are defined as “other waters.”

Section 401 of the CWA requires an applicant to obtain a certification from the state that discharge to a water of the U.S. will comply with provisions of the CWA. The regional water quality control boards (RWQCBs) administer Section 401 of the CWA within California.

4.2.3. Federal Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC Sections 703-711) protects migratory birds, their occupied nests, and their eggs from disturbance or destruction. Migratory birds include all nongame, wild birds found in the U.S., except the house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), and rock pigeon (*Columba livia*). A complete list of protected species can be found in 50 CFR 10.13.

4.2.4. Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, prohibits the import, export, take (which includes molest or disturb), sale, purchase or barter of any bald eagle (*Haliaeetus leucocephalus*) or golden eagle (*Aquila chrysaetos*), including their parts, nests, or eggs. Disturbance is defined as agitating or bothering a bald or golden eagle to a degree that causes, or is likely to cause, injury to an eagle, a decrease in its productivity, or nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

4.3 State Regulations

4.3.1 California Endangered Species Act

California Endangered Species Act (CESA) (Fish and Game Code 2050 et seq.) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. There are no state agency consultation procedures under CESA. CDFW administers CESA and authorizes take through permits or memorandums of understanding issued under Section 2081 of CESA, or through a consistency determination issued under section 2080.1. Section 2090 of CESA requires state agencies to comply with threatened and endangered species protection and recovery and to promote conservation of these species.

The State of California first began to designate species as “Fully Protected” prior to the creation of the CESA and the FESA. Most fully protected species have since been listed as threatened or endangered under CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CFGC Section 4700) provide that fully protected species may not be taken or possessed at any time, nor can CDFW prohibit issue incidental take permits to any state agency for fully protected species, except for necessary scientific research.

4.3.2 California Fish and Game Code

Fish and Game Code Section 1602 requires any entity to notify CDFW before undertaking any activity that may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake. CDFW issues a Lake or Streambed Alteration Agreement for activities which are determined by CDFW to substantially adversely affect fish and wildlife resources. A Lake or Streambed Alteration Agreement is also required for the removal of vegetation within the riparian zone. CDFW’s jurisdiction includes a stream and its bed and bank, and extends to the outer edge of riparian vegetation, if present.

The California Fish and Game Code (CFGC) protects defined wildlife species. Section 2000 of the CFGC prohibits take of any bird, mammal, fish, reptile, or amphibian except as provided by other sections of the code. The CFGC also designated “fully protected” fish and wildlife species under Sections 3511, 4700, 5050, and 5515. No take of a Fully Protected species may occur and no incidental permits are issued for take of Fully Protected species. Fish and Game Code Section 3503 sets forth protections for the nest or eggs of birds, take possession or destruction of birds of prey, and protects raptor nests.

Section 4150 of CFGC protects prohibits take of bats and other non-game mammals. “Take” may include any activity resulting in mortality of non-game mammals, or disturbance sufficient to disrupt normal breeding activities, resulting in the death of young (e.g. destruction of a bat maternity colony or roost).

The Native Plant Protection Act of 1973 (Fish and Game Code Sections 1900–1913) protects certain plant species and includes provisions that prohibit the taking of endangered or rare native plants. CDFW administers the Native Plant Protection Act and defines rare plant species as most which have a CRPR ranking of 1A, 1B, 2A, and 2B. Some CRPR 3 and 4 plants are considered if the population has local significance in the area and is subject to project impacts.

4.3.3 Porter-Cologne Water Quality Control Act

The Porter-Cologne Act establishes protections for waters of the state, which are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” including isolated and non-navigable water and wetlands. The RWQCB administers the Act under the State Water Quality Certification Program which regulates discharges of fill and dredged material. Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact “Waters of the State,” are subject to a Water Quality Certification issued under the CWA Section 401.

If a proposed project does not require a federal permit but does involve dredge or fill activities that may result in a discharge to “waters of the State,” the RWQCB regulates the dredge and fill activities to waters of the state and issues Waste Discharge Requirements.

4.4 Local Plans and Regulations

The City of Rio Vista is a plan participant in the Draft Solano County Multispecies Habitat Conservation Plan (HCP). The HCP allows agencies to issue Incidental Take Permits to project applicants for impacts to federal and state listed endangered species within the plan area. The HCP identifies habitat resources at a countywide basis and contains conservation and mitigation measures to protect listed species for projects which would be covered by the HCP. While the City is a plan participant in the draft HCP, there are no federal or state listed species on the project site requiring permitting through the HCP.

There are no local City of Rio Vista Municipal Code and Ordinances for tree protection or other special status resources and habitats.

5.0 Results

A search of biological databases identified 16 special status animals and 8 special status plants with known or potential occurrences within the City of Rio Vista USGS Quad. Figures 3 and 4 show CNDDDB records of special status plant and animal species observations within a 5-mile radius of the project area.

Tables 1 and 2 summarize the preferred habitat types and likelihood of special status animal and plant species to occur in the project area, respectively. Of the 16 special status animals, the occurrence of one species, Swainson’s hawk (*Buteo swainsoni*), was recorded in CNDDDB within a 5-mile radius of the project area and has moderate potential to occur within or near the project site. Of the 8 special status plants, no CNDDDB observations of these species occurred on the project site and all are unlikely to occur on the project site.

There are no federally designated critical habitats or essential fish habitat within the project area. No sensitive natural communities, as defined by CDFW, were identified on site.

Field observations confirmed the vegetation in the project area and vicinity is dominated by ruderal non-native vegetation consistent with disturbed conditions. Some individual stands of golden poppy were observed (*Eschscholzia californica*) and a few small mammal burrows are present on site. A

portion of the vegetation has been mowed and may be routinely maintained along the west and south of the property. The entirety of the site is in an upland area and no aquatic or riparian habitat exists on site. No road ruts, ditches, or other drainage features were observed on site (Figures 5 through 7).

Natural Resource Conservation Service (NRCS) web soil survey reports the site is comprised entirely of Tujunga fine sand. Site observations were consistent with the NRCS data and little variability in soil type was observed where it was visible. This soil type has a high permeability, is excessively drained and depth to a restrictive layer is more than 80 inches for this soil type. While vernal pool species were identified with potential to occur in the larger vicinity (USGS Quad), these soils are not conducive to holding water or resulting in a flooded or ponding condition. In addition, there is a lack of aquatic features in the areas immediately surrounding the site.

Table 1: Special status animal species and likelihood to occur in project area

Scientific Name	Common Name	Status	Habitat types	Likelihood to Occur in the Project Area
<i>Spirinchus thaleichthys</i>	longfin smelt	FC/ST	Estuarine open water. Spawns in fresh water in the upper end of the San Francisco Bay; occurs year-round in the Suisun Bay.	Not likely. No aquatic habitat is present in the project area
<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead - Central Valley DPS	FT	Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	Not likely. No aquatic habitat is present in the project area
<i>Hypomesus transpacificus</i>	Delta smelt	FT/SE	Shallow tidal waters of the Sacramento and San Joaquin River Delta	Not likely. No aquatic habitat is present in the project area
<i>Branchinecta conservatio</i>	conservancy Fairy Shrimp	FE	Shallow, ephemeral, cool-water vernal pools with moderately turbid water. Known location in Solano County located at Jepson Prairie, over 15 miles from project area.	Not likely. No vernal pool habitat or depressional features observed in the project area
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	Vernal pools and ditches in the Central Valley	Not likely. No vernal pool habitat or depressional features observed in the project area
<i>Lepidurus packardii</i>	Vernal pool tadpole shrimp	FE	Occurs in vernal pools, clay flats, alkaline pools, roadside ditches and road ruts.	Not likely. No vernal pool habitat or depressional features observed in the project area

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Scientific Name	Common Name	Status	Habitat types	Likelihood to Occur in the Project Area
			Endemic to the Central Valley	
<i>Elaphrus viridis</i>	Delta green ground beetle	FT	Vernal pools and open grasslands adjacent to vernal pools or roadside ditches. Known location in Solano County located at Jepson Prairie, over 15 miles from project area.	Not likely. No vernal pool habitat or depressional features observed in the project area. No suitable habitat for prey species
<i>Callophrys mossii bayensis</i>	San Bruno elfin butterfly	FE	Rocky outcrops in coastal mountains near San Francisco.	Not likely. Project area is outside known habitat range and contains no suitable habitat
<i>Desmocerus californicus dimorphus</i>	Valley Elderberry Longhorn Beetle	FT	Near rivers and streams. Host plant is <i>Sambucus spp.</i>	Not likely. No riparian habitat on site or in the vicinity and no host plant. Present in project area.
<i>Apodemia mormo langei</i>	Lange's metalmark butterfly	FE	Sand dune habitat along San Joaquin River in Contra Costa County	Not likely. No habitat exists outside of Contra Costa County.
<i>Thamnophis gigas</i>	giant gartersnake	FT/ST	Associated with aquatic habitats near agricultural wetlands or waters; and adjacent uplands in the Sacramento and Central Valley	Not likely. No aquatic habitat is present in or adjacent to the project area
<i>Ambystoma californiense</i>	California tiger salamander Central CA DPS	FT/ST	Restricted to grasslands and low foothills with vernal pools and wetlands for breeding; uses small mammal burrows in suitable uplands during the dry season	Not likely. No aquatic habitat is present in or adjacent to the project area. Small mammal burrows exist on site but project area is surrounded by roads and developed areas and lack of aquatic habitat beyond the project area make migration to project area unlikely
<i>Rana draytonii</i>	California red-legged frog	FT	Breeds in pools or backwaters within streams, creeks, ponds and lagoons. Upland habitats include downed woody vegetation, small mammal burrows and	Not likely. No aquatic habitat or suitable upland habitat is present in or adjacent to the project area

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Scientific Name	Common Name	Status	Habitat types	Likelihood to Occur in the Project Area
			refugia from heat and predators	
<i>Rallus obsoletus obsoletus</i>	California ridgway's rail (formerly California clapper rail)	FE/SE	Salty and brackish water marshes with pickleweed and cordgrass	Not likely. No suitable habitat is present in or adjacent to the project area
<i>Buteo swainsoni</i>	Swainson's hawk	ST	Open and semi-open grasslands and prairies. Nest near riparian areas or lone trees in fields or pastures adjacent to suitable foraging habitat.	Moderate. Observed in 2007 within approximately 2 miles of project area. Undeveloped open areas in the vicinity could provide foraging habitat. There is a lack of suitable nesting habitat within the project area.
<i>Riparia riparia</i>	bank swallow	ST	Riparian areas, usually rivers in larger lowland valleys of northern California. Nests in colonies in vertical banks or bluffs in alluvial, friable soils.	Not likely. No riparian habitat is present in or adjacent to the project area
FE = Endangered Species under the Federal Endangered Species Act FT = Threatened Species under the Federal Endangered Species Act FC = Candidate for listing under the Federal Endangered Species Act SE = Endangered Species under the California Endangered Species Act ST = Threatened Species under the California Endangered Species Act DPS = Distinct population segment				

Table 2: Special status plant species and likelihood to occur in project area

Scientific Name	Common Name	Status	Habitat types	Potential to Occur in the Project Area
<i>Oenothera deltoides ssp. howellii</i>	Antioch Dunes evening-primrose	FE/SE	Dune systems along the San Joaquin River	Not likely. No suitable habitat is present in or adjacent to the project area
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	SR 1B.1	Freshwater or brackish marshes or estuarine habitat	Not likely. No suitable habitat is present in or adjacent to the project area
<i>Extriplex joaquinana</i>	San Joaquin spearscale	1B.2	Chenopod scrub species, meadows and seeps, valley foothill grassland, saline and alkaline	Not likely. Lack of suitable habitat present in or adjacent to the project area.

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Scientific Name	Common Name	Status	Habitat types	Potential to Occur in the Project Area
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	woolly rose-mallow	1B.2	Marshes	Not likely. No suitable habitat is present in or adjacent to the project area
<i>Juglans hindsii</i>	Northern California black walnut	1B.1	Riparian, forested and woodland areas	Not likely. No suitable habitat is present in or adjacent to the project area. Not observed during field visit
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Delta tule pea	1B.2	Brackish and freshwater marshes and slough edges	Not likely. No suitable habitat is present in or adjacent to the project area
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	1B.2	Shallow, freshwater marshes and swamps at elevations lower than approximately 2,100 feet	Not likely. No suitable habitat is present in or adjacent to the project area
<i>Symphotrichum lentum</i>	Suisun Marsh aster	1B.2	Brackish and freshwater marshes	Not likely. No suitable habitat is present in or adjacent to the project area
CR = 'Rare' plant species under the California Native Plant Species Protection Act; California Rare Plant Designation Ranking 1A - presumed extinct in California; 1B - rare, threatened, or endangered in California and elsewhere; 2A - presumed extirpated in California, but more common elsewhere; 2B - rare threatened, or endangered in California, more common elsewhere; 3 - Plants About Which More Information is Needed (review list)				

5.0 Conclusion

Review of readily available and relevant biological data, and a field visit determined the site lacks suitable habitat and, with the exception of one species, it is unlikely for special status biological resources to occur on site. This is mainly attributed to the highly disturbed nature of the site, the area is surrounded by roads and existing disturbed or developed areas, and the lack of aquatic and riparian habitats in the project area and vicinity.

Given the presence of small mammal burrows and past observations of Swainson’s hawk within approximately 2 miles of the project site, there is moderate potential for the species to occur in the project area. Potential foraging habitat exists on site though is marginal given the relatively small size of the site, that much of the site is unvegetated, the site it is surrounded by roads and industrial development on all sides. There is no suitable nesting habitat on site. Within urban areas, construction activities (e.g., heavy equipment operation) within 0.25 mile could have potential to disturb nesting species. To avoid this potential indirect impact to Swainson’s hawk the following mitigation measure (MM) is recommended.

MM BIO-1: If construction activities are planned to begin after March 1, a preconstruction breeding survey for Swainson’s hawks will be conducted throughout areas of suitable nesting habitat within 0.25 miles of the project site. If a Swainson’s hawk nest is observed within 0.25 mile of planned construction activities, CDFW will be contacted to determine whether project-related activities are likely to impact the nesting pair and whether any avoidance and minimization measures must be established to avoid impacts.

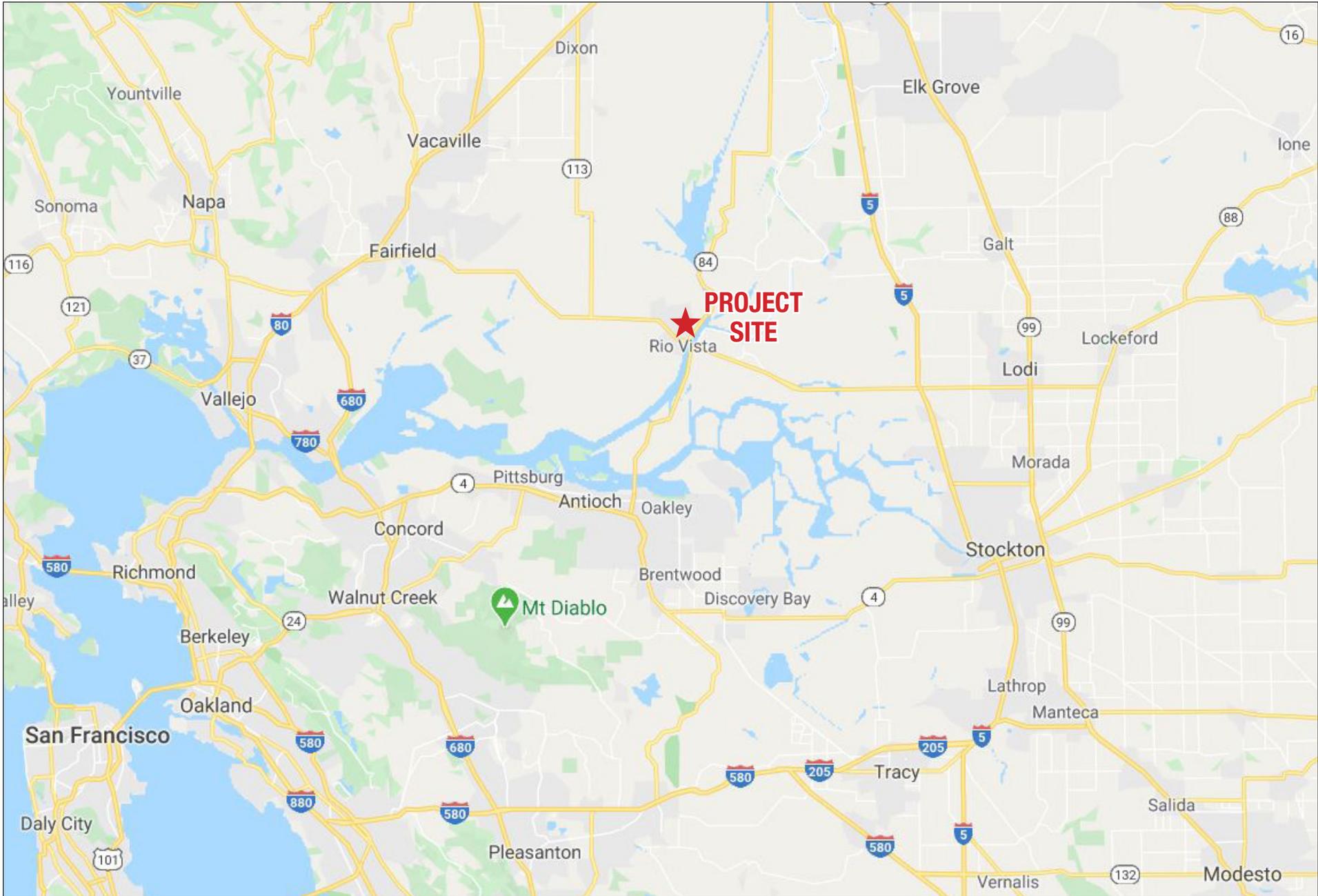


FIGURE 1: Regional Location Map
Rio Vista Manufacturing

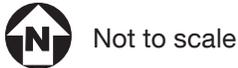
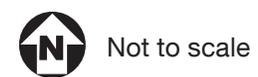




FIGURE 2: Aerial Site View
Rio Vista Manufacturing



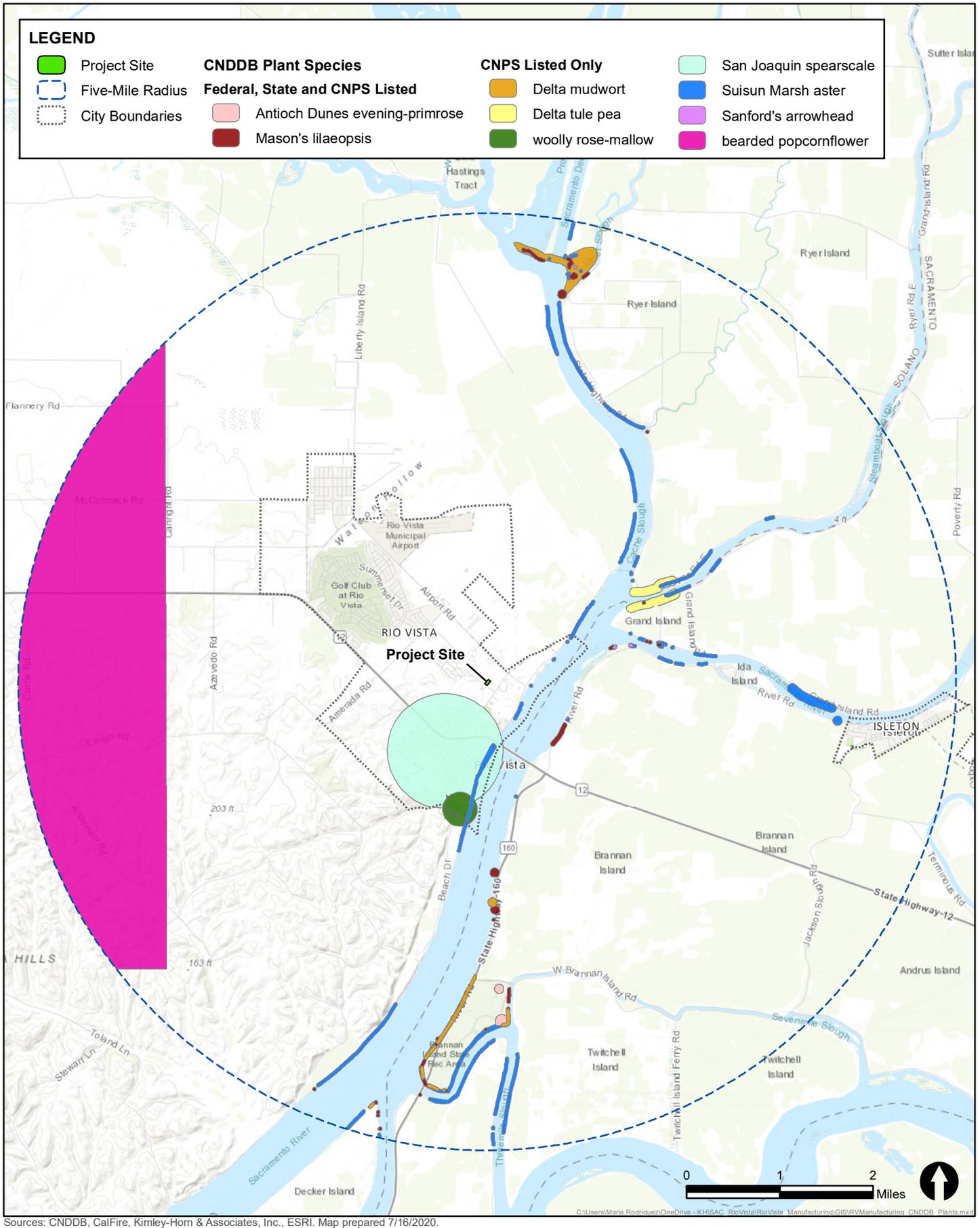


FIGURE 3: CNDDDB Listed Plant Species
 Rio Vista Manufacturing Project

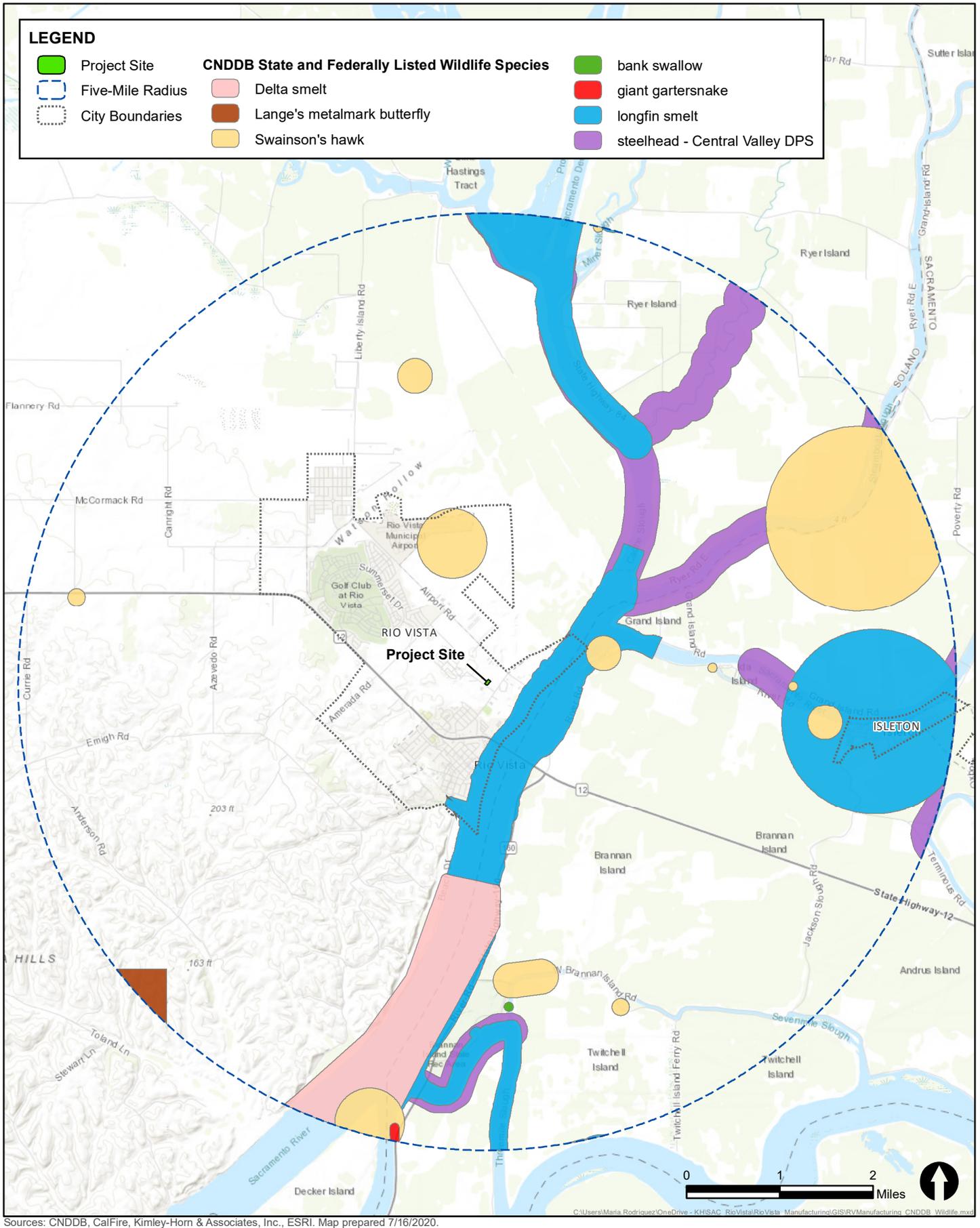


FIGURE 4: CNDDDB Listed Wildlife Species
 Rio Vista Manufacturing Project

Figure 5. Project site looking northwest. Police department buildings shown are beyond the project site.



Figure 6. Project site looking south with storm basin shown beyond the project site.



Figure 7. Project site looking northeast and showing dense ruderal, weedy vegetation cover representative of site. Existing cannabis facility is pictured and beyond project site.



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